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STATE OF OREGON

REPORT

STATE HIGHWAY COMMISSION

1934-1936

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Commission
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Twelfth Biennial Report

OF THE

Oregon State Highway Commission

For the period July 1, 1934, to
June 30, 1936

OREGON STATE HIGHWAY COMMISSION

HENRY F. CABELL, Chairman.
E. B. ALDRICH, Commissioner; F. L. TOU VELLE, Commissioner
R. H. BALDOCK, State Highway Engineer
H. B. GLAISYER, Secretary

STATE PRINTING DEPT.

OREGON STATE HIGHWAY COMMISSION

FORMER MEMBERS AND TERMS

E. J. ADAMS, Eugene, February 28, 1917, to March 31, 1918.

W. L. THOMPSON, Pendleton, February 28, 1917, to October 15, 1919.

S. BENSON, Portland, February 28, 1917, to November 15, 1920.

R. A. BOOTH, Eugene, April 1, 1918, to May 28, 1923.

J. N. BURGESS, Pendleton, October 16, 1919, to November 21, 1919.

E. E. KIDDLE, Island City, November 26, 1919, to December 28, 1920.

J. B. YEON, Portland, November 22, 1920, to March 31, 1923.

W. B. BARRATT, Heppner, January 8, 1921, to March 27, 1923.

WM. DUBY, Baker, March 27, 1923, to July 31, 1927.

H. B. VAN DUZER, Portland, April 1, 1923, to October 7, 1931.

W. H. MALONE, Corvallis, May 28, 1923, to March 31, 1927.

C. E. GATES, Medford, April 1, 1927, to March 11, 1931.

ROBERT W. SAWYER, Bend, August 1, 1927, to May 28, 1930.

M. A. LYNCH, Redmond, May 29, 1930, to August 1, 1931.

CHAS. K. SPAULDING, Salem, March 11, 1931, to February 16, 1932.

WM. HANLEY, Burns, August 1, 1931, to February 16, 1932.

J. C. AINSWORTH, Portland, October 8, 1931, to February 16, 1932.

LESLIE M. SCOTT, Portland, February 17, 1932, to March 31, 1935.

CARL G. WASHBURNE, Eugene, February 17, 1932, to October 9, 1935.

PRESENT MEMBERS

HENRY F. CABELL, Portland, appointed April 1, 1935.

E. B. ALDRICH, Pendleton, appointed February 17, 1932.

F. L. TOU VELLE, Jacksonville, appointed October 9, 1935.

TABLE OF CONTENTS

PART ONE. REPORT OF HIGHWAY COMMISSIONERS

	Page
Revenues and Requirements	7
State Highway Bond Debt	13
Oregon Coast Highway Bridges	15
Planning Survey	18
Roadside Beautification	20
Travel and Information Bureau	20

PART TWO. REPORT OF HIGHWAY ENGINEER

Revenues and Expenditures	25
State Highway Expenditure Chart	28
Estimates of Incomes and Disbursements for 1937 and 1938	29
Progress in Highway Improvement	31
Federal Aid and Federal Relief Work	41
Map of Federal Aid System	44
PWA Projects	46
WPA Projects	47
Forest Highways	49
Map of Forest Highway System	50
Oregon Forest Highway System	51
Federal Aid Funds and Forest Road Funds Apportioned to Oregon	52
Secondary State Highways	53
Market Roads	54
Coast Highway Bridges	54
Betterment Work	65
Maintenance Work	67
Roadside Beautification	69
State-wide Highway Planning Survey	70
State-wide Radio Network	72
Tourist Travel Stimulation	72
State Parks	75
Organization	76
Legal and Right of Way Departments	79

PART THREE. FINANCIAL AND STATISTICAL INFORMATION

Table No. 1.	Detailed Summary of Income and Expenditures	84
Table No. 2.	Summary of Expenditures	85
Table No. 3.	Record of Mileages Improved and Maintained	86
Table No. 4.	Yearly Expenditures from Various Funds, 1917 to 1936	87
Table No. 5.	State Funds Received and Expended, 1917 to 1936	87
Table No. 6.	Incomes from Different Sources, 1917 to 1936	88
Table No. 7.	Expenditures for Different Purposes, 1917 to 1936	90
Table No. 8.	Construction Expenditures Classified by Counties, 1917 to 1936	92

TABLE OF CONTENTS—Continued

Page

Table No. 9. Construction Expenditures Classified by Highways, 1917 to 1936 93

Table No. 10. Maintenance Expenditures Classified by Counties, 1917 to 1936 94

Table No. 11. Maintenance Expenditures Classified by Highways, 1917 to 1936 95

Table No. 12. Disposition of 1932 Secondary Highway Funds 96

Table No. 13. Disposition of 1933 Secondary Highway Funds 98

Table No. 14. Disposition of 1934 Secondary Highway Funds 99

Table No. 15. Disposition of 1935 Secondary Highway Funds 100

Table No. 16. Expenditures on Secondary State Highways, 1932 to to 1936 101

Table No. 17. Forest Road Expenditures Classified by Counties, 1917 to 1935 102

Table No. 18. Forest Road Expenditures Classified by Highways, 1917 to 1935 103

Table No. 19. Statistics Pertaining to Forest Road Work, 1918 to 1935 104

Table No. 20. County Disbursements for Road Purposes 105

Table No. 21. County Indebtedness for Road Purposes 106

Table No. 22. Apportionment to Counties of Motor Vehicle Fees, 1920 to 1936 107

Table No. 23. Mileages of Primary State Highways 108

Table No. 24. Mileages of Primary State Highways by Counties 109

Table No. 25. Mileages of Secondary State Highways by Counties 110

Table No. 26. Mileages of County Roads 111

Table No. 27. Secondary State Highways 112

Map of State Highway System—Opposite page 112.

List of Employes of the State Highway Commission 115

List of Persons Rendering Professional or Special Services 145

LETTER OF TRANSMITTAL

Salem, Oregon,
January 1, 1937.

HONORABLE CHARLES H. MARTIN,

Governor of the State of Oregon.

Dear Sir:

In compliance with the provisions of section 44-111, Oregon Code 1930, we have the honor of presenting to you the report of the Oregon State Highway Commission for the period from July 1, 1934, to June 30, 1936.

Respectfully yours,

OREGON STATE HIGHWAY COMMISSION

HENRY F. CABELL, Chairman,

E. B. ALDRICH, Commissioner,

F. L. TOU VELLE, Commissioner.

Biennial Report

OF THE

Oregon State Highway Commission

FISCAL YEARS 1935 AND 1936

INTRODUCTION

It is the purpose of this report to present such financial statements, statistics and other information pertaining to state highway affairs as are needed for intelligent consideration of Oregon's highway problems, and to discuss in some detail the financial set-up under which the state highways are now being operated, maintained and improved. This deals particularly with the period from July 1, 1934, to June 30, 1936, which is the fiscal period elapsed since the last previous report was submitted. It contains, however, much statistical information dating back to 1917, the year in which Oregon commenced its road building program, and includes forecasts of the probable revenues and requirements of the next biennial period. The calendar year basis of showing information has been resorted to when clarity is benefited.

Part One of the report contains the Commission's discussion of budgetary and other financial matters. Part Two is the report of the State Highway Engineer to the State Highway Commission. Part Three contains various financial statements and statistical compilations.

PART ONE

REVENUES AND REQUIREMENTS

The funds disbursed by the State Highway Commission are of two general classes, namely: state funds and federal funds. The state funds are used to meet maintenance and operating expense and to pay due interest and principal on outstanding bonds. Such balance as is left after those obligations have been met is used in highway construction and improvement, usually on a cooperative basis with the Federal Government. They are derived entirely from fees and taxes paid by motor vehicle owners, these fees and taxes consisting of (1) motor vehicle license fees, (2) gasoline tax, (3) motor transportation fees, and (4) fines for traffic law violations.

The federal funds disbursed by the Highway Commission are federal aid funds and work relief funds of such kinds as may be made available from time to time by Congress. Federal funds can be used only on improvement and construction work of a permanent nature, and usually they can be used only on highways included in the federal aid highway system. They are not available to meet maintenance expense, operating expense, interest or principal on bonds, survey expense, or right of way costs, and they are seldom available for work on county roads or secondary highways. The availability of federal funds is always contingent upon

right of way expense and certain other expense being borne by the State (or, in some cases by the county or city), and except when offered for employment relief purposes, they require cooperative expenditure by the State in considerable amount, the minimum of state cooperation usually being 38 per cent of construction cost, plus the entire cost of surveys, rights of way and certain other incidental items. The State's portion of the total federal aid construction costs is approximately 47½ per cent, the Federal Government's share 52½ per cent.

As the highway financial situation is most easily grasped and understood when the state fund revenues and requirements are considered separately from federal funds, the two classes of funds will first be discussed separately under the headings "State Funds" and "Federal Funds", and later discussed in combination under the heading "State Highway Budget for 1937".

State Funds:

Incomes for state highway purposes reached a maximum in the calendar year 1930, the total for that year being $12,243,383. From that point, due to the adoption of the $5 flat license fee and to the unfavorable economic conditions then obtaining, the income dropped to $9,826,743 in 1931, to $8,879,304 in 1932, and to $6,315,855 in 1933.

This sum was approximately $1,000,000 below the fixed requirements of bond interest and principal, maintenance, administration and unavoidable reconstruction of old bridges and worn-out surfaces as set up in the previous biennial report. A portion of the sum necessary for the reconstruction of old bridges and worn-out road surfaces was provided by the use of federal funds. The remainder of the deficit, together with the further deficit carried over from the work relief hand labor projects on state highways in 1932, necessitated the sale in 1933 of five-year bonds to the amount of $1,500,000.

Since 1933, the income has increased steadily until in 1936 it has reached a total of $10,500,000, and until in 1937 it may be expected to reach a total of $11,250,000.

During the low years of 1932, 1933 and 1934, the Highway Department was able to function normally only by reason of moneys obtained from the Federal Government under the provisions of the various federal work relief acts passed during that period, and by reason of the federal moneys having been made available without the financial cooperation or "matching" usually required.

It is quite natural that people, in view of the manifestly increased traffic during the past two years and in view of the rather heavy construction program carried out during the four-year period, 1932 to 1935, inclusive, when the revenues were decidedly low, should believe that the time is at hand for either a reduction in revenues or the reallocation of the state highway fund, which reallocation would give additional money to the counties or to the cities. However, with the exception of approximately $5,265,000 of state funds remaining available during this four-year period after payment of the Department's fixed expense, all the moneys for construction were federal grant funds which did not require the use of state match money. The $1,316,000 of state funds available per year was used to buy rights of way, to make surveys and plans, to care for the

non-participating items in the federal construction program, and to make necessary improvements on highways not eligible for federal aid.

During 1936, the Federal Government returned to the match basis for highway construction for a portion of its funds. During 1937 and 1938 the Federal Government will require that the greater portion of its funds for highway construction be matched with state funds. Approximately $3,215,000 of federal moneys will be available for each of the two fiscal years. Estimates disclose that this will require the application of not less than $2,550,000 of state funds to match the federal requirements and to purchase the required rights of way. During 1936 the revenues exceeded the fixed requirements by approximately this amount. Estimates for next year contemplate an increased revenue above that of 1936 of approximately $800,000.

In 1935 and 1936, with a continuation of federal financing of construction and reconstruction work, and with increasing state revenues, the stringency was considerably relieved, but even so, the 1936 revenues were not sufficient to take up all of the federal aid funds available and to perform necessary betterment work for which federal funds were not available, without drawing on 1937 revenues. As a result, the Department will go into the year 1937 with approximately $1,750,000 of its 1937 income obligated.

Were it not for the carry-over obligation here referred to, the expected 1937 revenue of $11,250,000 would exceed by approximately $700,000 the amount required to meet all fixed expense (bond payments, highway maintenance, et cetera) and to match all available federal aid. Absorption of the carry-over obligation, will however, leave the income short approximately $1,000,000 of meeting all requirements and will force postponement to 1938 of approximately $2,000,000 of federal aid work that would otherwise be done during 1937.

With relation to the entire state highway transportation system, the principles of highway economics require provision for additional highway facilities rising through growth and development in population, business and transportation. Such principles further require orderly reconstruction to avoid any considerable accumulation of obsolescence. Unless the needed expansion and reconstruction of present facilities are taken care of each year, in a short time the growth and development in population and business will be hampered and held back by inadequate transportation facilities.

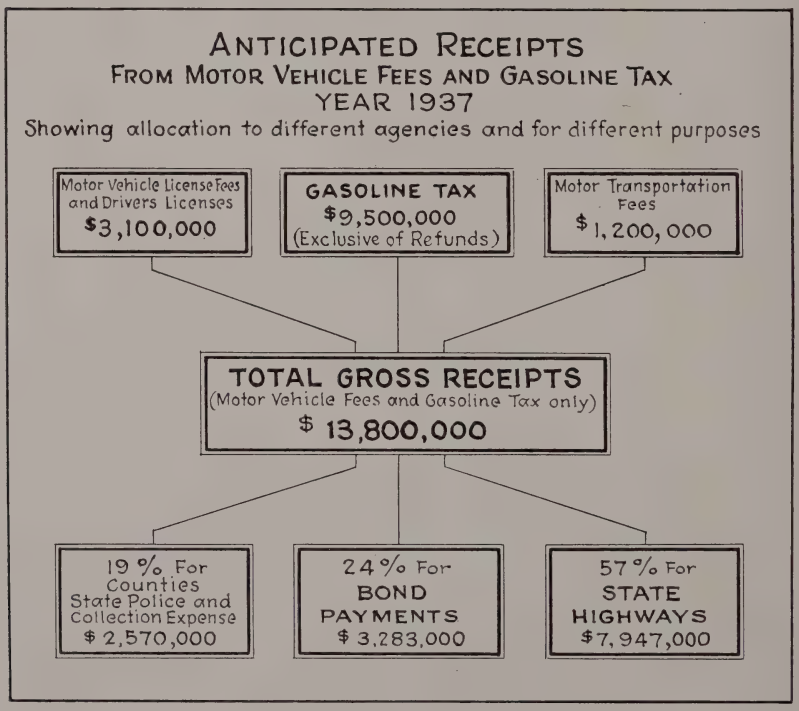
In Oregon, the annual program of construction, reconstruction and expansion need not be large, but it must be continuous. The review of the state highway finances points conclusively to the fact that any material reduction, diversion or reallocation will prevent the matching of federal funds and retard the development of the state highway system.

Present estimates indicate a balance of approximately $700,000 in next year's revenue over and above that required for fixed expense and the matching of federal aid. This money is needed for improvement work on secondary highways and on primary highways not eligible for federal aid. However, the counties of the state feel that they should share in the increased highway revenues and the Association of County Judges and Commissioners passed a resolution asking the legislature for an increase

of approximately $400,000 annually. Allocation to the counties of $2,000,000 rather than $1,600,000, or a percentage of the revenues netting this amount, would seem fair and equitable and would enable the counties to share in the increased revenues. The Commission does not believe that more than $2,000,000 of highway revenues can be allocated to the counties at this time without seriously damaging the highway program.

The detail of present annual state highway income is as follows:

	Gross Amounts Paid by Motor Vehicle Owners	Collection Expense	Net Amount for State Highways, State Police and Counties
Motor vehicle license fees and driver's license fees	$ 3,100,000.00	$ 350,000.00	$ 2,750,000.00
Gasoline tax ($10,800,000 less $1,300,000 refunds)	9,500,000.00	30,000.00	9,470,000.00
Motor transportation fees	1,200,000.00	270,000.00	930,000.00
Fines	20,000.00		20,000.00
Totals	$13,820,000.00	$ 650,000.00	$13,170,000.00
Less $1,600,000 to counties and $320,000 to state police department			1,920,000.00
Net revenue for state highway purposes			$11,250,000.00



The items which comprise the annual fixed expense of the Department and the amounts of state money annually required to match federal aid, are shown in the tabulations below.

1. **Items of Fixed Expense—**	
Bond interest and principal	$3,300,000.00
Maintenance of primary highways	2,600,000.00
Maintenance of secondary highways	600,000.00
Operations of ferries and drawbridges	25,000.00
Maintenance of state parks	100,000.00
Construction expenditures on secondary highways necessary to comply with law	100,000.00
Minor betterment work	200,000.00
Required construction work ineligible for federal aid	500,000.00
Administration and supervision	350,000.00
Legislative authorizations and miscellaneous	50,000.00
Travel and information bureau	100,000.00
Contingencies	75,000.00
Total of fixed expense items	$8,000,000.00

	Federal Money	State Money
2. **Amounts Required to Match Federal Aid—**		
Regular federal aid funds	$2,045,000.00	$1,450,000.00
Secondary highway funds	410,000.00	300,000.00
Grade separation funds	585,000.00	75,000.00
Federal lands highway funds	175,000.00	75,000.00
Forest highway funds	1,160,000.00	100,000.00
Rights of way		350,000.00
Surveys and plans		200,000.00
Totals	$4,375,000.00	$2,550,000.00

Federal Aid:

For the past seven years (1930 to 1936), federal aid for highways has been granted largely as a work relief measure, and the amounts granted have greatly exceeded the grants of normal times. The grants or allotments to Oregon during that time, exclusive of the special loan and grant for the five Coast Highway bridges, have amounted to approximately $34,000,000, the several different allotments having been as indicated in the following tabulation:

Date of Act Authorizing Allotment	Fund Designation	Amount Allotted to Oregon
April 4, 1930	1931 Regular federal aid funds	$ 798,445.00
April 4, 1930	1932 Regular federal aid funds	1,997,569.00
April 4, 1930	1933 Regular federal aid funds	1,767,476.00
Dec. 20, 1930	1931 Emergency advance funds	1,299,211.00
Dec. 20, 1930	1931 Federal lands highway funds	193,377.00
July 21, 1932	1933 Emergency construction funds	2,001,740.00
July 21, 1932	1933 Federal lands highway funds	130,705.00
June 16, 1933	1934 NRA funds	6,106,896.00
June 16, 1933	1934 Federal lands highway funds (NRFL)	335,141.00
June 19, 1934	1935 Federal lands highway funds (FLEC)	170,861.00
June 18, 1934	1935 NRA funds	3,097,814.00
June 18, 1934	1936 Federal lands highway funds	174,331.00
June 18, 1934	1936 Regular federal aid	2,044,633.00
June 18, 1934	1937 Regular federal aid	2,045,078.00
April 8, 1935	1936 Works program highway funds	3,038,642.00
April 8, 1935	1936 Works program grade separation funds	2,334,204.00
June 16, 1936	1938 Regular federal aid (estimated)	2,045,000.00
June 16, 1936	1938 Grade separation funds (estimated)	585,000.00
June 16, 1936	1938 Secondary highway funds (estimated)	410,000.00
June 16, 1936	1938 Federal lands highway funds (estimated)	175,000.00
June 16, 1936	1939 Regular federal aid (estimated)	2,045,000.00
June 16, 1936	1939 Grade separation funds (estimated)	585,000.00
June 16, 1936	1939 Secondary highway funds (estimated)	410,000.00
June 16, 1936	1939 Federal lands highway funds (estimated)	175,000.00
	Total	$33,966,123.00

With the exception of the $6,430,000 included in the allotments authorized on June 16, 1936, the amounts listed are definitely arranged for and their receipt by the State is assured. The allotments authorized on June 16, 1936, are contingent upon the State's providing the required amounts of financial cooperation. Present indications are that the State will be able to provide this cooperation within the time limits specified, but not without some delaying of work from one year to the next.

It is expected that the allotments for the fiscal year 1938 will be made available for contracting shortly after January 1, 1937, and that from one-half to two-thirds of the work to be done under the 1938 allotments will be done during the 1937 construction season.

The allotments for the fiscal years 1931 to 1936, inclusive, total $25,491,045. Of that amount, approximately $22,500,000 will have been disbursed by December 31, 1936. The contracting of the 1937 allotment was commenced in August, 1936.

Federal funds disbursed by the State Highway Commission during the years 1935 and 1936, and estimates of the amounts expected to be disbursed during 1937 and 1938 (exclusive of Coast Highway bridge funds), are as follows:

1935	$3,513,593.00
1936 (Approximate)	5,585,000.00
1937 (Estimated)	6,390,000.00
1938 (Estimated)	3,560,000.00

State Highway Budget for 1937:

The grand total of all funds, both state and federal, expected to be available for the use of the State Highway Commission during the calendar year 1937, is $19,159,000. It is made up of the following items:

State Funds:

Current state revenues (state highway share of motor vehicle license fees, gasoline tax, motor transportation fees and fines)		$11,250,000.00
Balance on hand in State Highway fund on January 1, 1937		474,000.00
Balance on hand in PWA coast bridge fund January 1, 1937		208,000.00
County contributions on cooperative projects		85,000.00
Total for state funds		$12,017,000.00

Federal Funds:

Programs prior to 1937 fiscal year	$ 3,193,000.00	
1937 Regular federal aid program	1,700,000.00	
1937 PWA program	450,000.00	
PWA coast bridge grant funds	299,000.00	
1938 Programs	1,500,000.00	
Total for federal funds		$ 7,142,000.00
Grand total		$19,159,000.00

The manner in which it is proposed to utilize these state and federal funds is as follows:

State Funds:		
Principal and interest on bonds		$ 3,283,000.00
Maintenance of highways (primary and secondary)		3,200,000.00
Operation of ferries and drawbridges		25,000.00
State parks		100,000.00
Minor betterment work		200,000.00
Administration and supervision		350,000.00
Legislative authorizations and miscellaneous		60,000.00
Reserve for working balance		646,000.00
Cooperation on forest highway work		100,000.00
Cooperation on PWA projects		552,000.00
Cooperation on federal aid and coast bridge projects		1,995,000.00
State projects on primary highways		471,000.00
State projects on secondary highways		300,000.00
Rights of way, quarries, gravel pits, etc.		350,000.00
Surveys		200,000.00
Tourist information bureau		100,000.00
Operation of state radio system		10,000.00
Contingencies		75,000.00
Total for state funds		$12,017,000.00
Federal Funds:		
Programs prior to 1937 fiscal year	$ 3,193,000.00	
1937 Regular federal aid program	1,700,000.00	
1937 PWA program	450,000.00	
PWA coast bridge grant funds	299,000.00	
1938 Programs (total available if it could be matched, $3,200,000)	1,500,000.00	
Total for federal funds		$ 7,142,000.00
Grand total		$19,159,000.00

A study of the foregoing estimates brings out the following pertinent facts:

1. That of the total amount of money to be disbursed by the Highway Commission in 1937, $7,142,000, or 37 per cent, is federal money.

2. That of the $12,017,000 of state money available, $646,000 is to be held as a working balance or reserve to prevent deficits when bond payments come simultaneously with heavy construction disbursements, and $11,371,000 is to be disbursed.

3. That of the state money to be disbursed, 27 per cent is to be used to pay interest and principal on bonds, 27 per cent is to be used to maintain the existing highways and that 30 per cent is to be used to match federal aid and to provide rights of way and surveys for federal aid projects.

4. That there is a shortage of state funds with which to match available federal aid funds, which shortage will necessitate postponement of a part of the federal aid program until 1938 income is in hand, and that any reduction in revenue may result in permanent loss of federal aid funds in corresponding amount.

STATE HIGHWAY BOND DEBT

The state highway bond debt as of July 1, 1936, amounted to $24,416,750. Included in this amount was an issue of $3,000,000 of 20-year bonds sold in 1935 to refund a like amount of short-term bonds sold in 1934 and 1935, to finance the construction of the five Oregon Coast Highway bridges and pay the portion of the cost of the bridges not borne by the Federal Government under a PWA agreement. A total of $4,200,000

of short-term bonds was authorized and sold, $2,000,000 being taken by the United States Government, one-half for a period of one year and one-half for six months, and the balance was sold in 1935 and 1936, as the financing of the bridge contracts required, to Ladd & Bush Bank, of Salem. A complete schedule of the state highway bond debt account appears below. Detailed information in regard to the special bonds issued in connection with the Coast Highway bridge project appears in Part Two of this report, under the heading "Coast Highway Bridges".

STATE HIGHWAY BONDED INDEBTEDNESS ACCOUNT

Year	Annual Principal	Annual Interest	Annual Total	Bonds Outstanding at End of Year
1917	$	$ 5,000.00	$ 5,000.00	$ 1,400,000.00
1918	.....	72,900.00	72,900.00	2,840,000.00
1919	.....	141,099.99	141,099.99	10,140,000.00
1920	.....	503,725.00	503,725.00	19,140,000.00
1921	.....	974,870.83	974,870.83	30,700,000.00
1922	125,000.00	1,521,266.67	1,646,266.67	36,075,000.00
1923	179,750.00	1,742,150.00	1,921,900.00	38,395,250.00
1924	334,500.00	1,824,240.00	2,158,740.00	38,060,750.00
1925	3,797,000.00	1,799,267.05	5,596,267.05	37,263,750.00
1926	1,197,000.00	1,722,761.65	2,919,761.65	36,066,750.00
1927	1,600,000.00	1,663,215.87	3,263,215.87	34,466,750.00
1928	1,750,000.00	1,586,060.99	3,336,060.99	32,716,750.00
1929	1,825,000.00	1,503,578.47	3,328,578.47	30,891,750.00
1930	1,925,000.00	1,418,314.70	3,343,314.70	30,466,750.00
1931	1,975,000.00	1,386,522.18	3,361,522.18	29,491,750.00
1932	2,975,000.00	1,369,435.06	4,344,435.06	27,516,750.00
1933	1,975,000.00	1,290,992.54	3,265,992.54	27,041,750.00
1934*	2,175,000.00	1,250,010.02	3,425,010.02	25,866,750.00
1935*	5,675,000.00	†1,225,541.73	6,900,541.73	25,691,750.00
1936*	2,950,000.00	1,089,213.37	4,039,213.37	23,441,750.00
1937	2,300,000.00	983,109.31	3,283,109.31	21,141,750.00
1938	2,300,000.00	876,189.27	3,176,189.27	18,841,750.00
1939	2,000,000.00	776,394.23	2,776,394.23	16,841,750.00
1940	2,075,000.00	683,724.19	2,758,724.19	14,766,750.00
1941	2,150,000.00	589,085.40	2,739,085.40	12,616,750.00
1942	2,125,000.00	493,790.36	2,618,790.36	10,491,750.00
1943	2,070,250.00	399,995.32	2,470,245.32	8,421,500.00
1944	1,915,500.00	308,610.28	2,224,110.28	6,506,000.00
1945	1,453,000.00	227,913.99	1,680,913.99	5,053,000.00
1946	1,053,000.00	166,998.95	1,219,998.95	4,000,000.00
1947	650,000.00	126,765.80	776,765.80	3,350,000.00
1948	500,000.00	104,109.53	604,109.53	2,850,000.00
1949	425,000.00	86,797.01	511,797.01	2,425,000.00
1950	325,000.00	72,171.99	397,171.99	2,100,000.00
1951	275,000.00	62,046.97	337,046.97	1,825,000.00
1952	275,000.00	52,984.45	327,984.45	1,550,000.00
1953	275,000.00	43,921.93	318,921.93	1,275,000.00
1954	275,000.00	34,859.41	309,859.41	1,000,000.00
1955	275,000.00	25,796.89	300,796.89	725,000.00
1956	200,000.00	17,531.25	217,531.25	525,000.00
1957	150,000.00	12,187.50	162,187.50	375,000.00
1958	150,000.00	8,437.50	158,437.50	225,000.00
1959	150,000.00	4,687.50	154,687.50	75,000.00
1960	75,000.00	937.50	75,937.50	.....
	$53,900,000.00	$30,249,212.65	$84,149,212.65	
Less refunding and temporary financing bonds	9,700,000.00	.....	9,700,000.00	
Totals for long-term construction bonds*	$44,200,000.00	$30,249,212.65	$74,449,212.65	

* Includes Coast bridge bonds.

† Includes $4,866.50 refund to cover accrued interest paid in by Ladd & Bush, Bankers, on Coast bridge bonds.

STATE HIGHWAY BONDS ISSUED, 1917 TO 1936

Year	Par Value of Bonds Sold		Time for Retirement	Bonds Retired Same Year
	Long-term Construction Bonds	Short-term Bonds for Temporary Financing		
1917	$ 400,000.00	$	8 years	$
	1,000,000.00		25 years	
1918	1,440,000.00		25 years	
1919	800,000.00		14 years	
	6,500,000.00		25 years	
1920	9,000,000.00		25 years	
1921		① 3,000,000.00	4 years	
	8,560,000.00		25 years	
1922	5,500,000.00		25 years	125,000.00
1923	2,500,000.00		25 years	179,750.00
1924				334,500.00
1925	3,000,000.00		25 years	3,797,000.00
1926				1,197,000.00
1927				1,600,000.00
1928				1,750,000.00
1929				1,825,000.00
1930	② 1,500,000.00		25 years	1,925,000.00
1931	③ 1,000,000.00		25 years	1,975,000.00
1932		④ 1,000,000.00	6 months	2,975,000.00
1933		⑤ 1,500,000.00	5 years	1,975,000.00
1934		⑥ 1,000,000.00	1 year	2,175,000.00
1935	⑦ 3,000,000.00		25 years	3,175,000.00
		⑥ 1,000,000.00	6 months	1,000,000.00
		⑥ 1,500,000.00	10 days	1,500,000.00
1936		⑥ 700,000.00	10 days	2,950,000.00
Totals	$44,200,000.00	$ 9,700,000.00		$30,458,250.00
Bonds retired	21,358,250.00	9,100,000.00		30,458,250.00
Bonds outstanding end of 1936	$22,841,750.00	$ 600,000.00		$

① Account of unfavorable bond market, $3,000,000 of 4-year bonds were sold with intention to refund in 1925 with long-term bonds at lower interest rate.

② This bond sale made to enable state to match available federal aid.

③ This bond sale made to finance state relief labor program.

④ This sale of six-months bonds was made to overcome deficit caused by change in date of licensing cars from January 1 to July 1.

⑤ This sale of five-year bonds was made to finance state relief program.

⑥ These sales of short-term bonds made to finance the construction of the five Oregon Coast bridges.

⑦ This sale was made to refund a like amount of Oregon Coast bridge bonds, resulting in a saving of interest.

OREGON COAST HIGHWAY BRIDGES

The five great bridge structures spanning the tidal currents of the bays and estuaries along the Oregon Coast Highway were completed during the past biennium at a cost of approximately $5,400,000. While the free ferries which served the traffic prior to the construction of these bridges were rather unique and to some extent an attraction for tourists, particularly those from the heart of this great continent, it had been apparent for the last four years that the ferries were inadequate to handle the traffic and that they, in fact, formed a positive barrier to the growth and development of the Oregon coast region.

These magnificent bridges, of sound structural design and pleasing architectural lines serve to further enhance the beauty of this famous drive along the rugged Oregon coast. The traffic on this road increased with the completion of the bridges to over three and one-half times the amount recorded when the free ferries were first opened.

BRIDGE OVER YAQUINA BAY ON THE OREGON COAST HIGHWAY AT NEWPORT

BRIDGE OVER ALSEA BAY ON OREGON COAST HIGHWAY AT WALDPORT, LINCOLN COUNTY

The bridges were financed through a loan and grant agreement with the Federal Public Works Administration, the agreement contemplating a total cost of $5,602,000—$1,402,000 of which was to come from the Federal Government as an outright grant and $4,200,000 of which was to come from the Federal Government as a loan. The loan was to be in the form of special revenue bonds issued by the State and purchased by the Federal Government, the bonds to bear 4 per cent interest and the payments of interest and principal to be made from revenues accruing through the charging of tolls. Before much progress had been made under this loan-grant agreement, improvement in the bond market made it apparent that a considerable saving could be effected by substituting for the federal loan, money borrowed in the open market. At the same time there developed considerable public sentiment against the plan of charging tolls for the use of the bridges. Accordingly, with special authority granted by the state legislature, the agreement with the Federal Government was revised to permit the financing of the loan portion of the project by the sale of general obligation bonds.

Under the revised agreement, general obligation bonds in the amount of $3,000,000 were sold at an interest rate averaging 2.624 per cent, the sale netting $2,893,283.86. The return from this bond sale financed the bridge construction work for several months, during which time improved economic conditions brought about increased highway revenues, which in turn enabled the Highway Commission to finance the remaining portions of the project from current highway revenues. Legal technicalities which this arrangement involved required the selling of short-term bonds in the amount of $4,200,000, but these have all since been retired.

As final settlement has not been effected in connection with all of the contracts involved, the exact completed cost of the project is not yet known, and the exact total of the grant money to be received from the Federal Government is not known. According to present estimates, the total cost will be approximately $5,435,867.48 and the total grant from the Government will be approximately $1,586,902. The amounts contributed from different sources will be about as follows:

Federal grant funds	$1,586,902.00
Sale of $3,000,000 general obligation bonds	2,893,283.86
Current state highway revenue	955,681.62
Total	$5,435,867.48

The project costs comprise the following items:

Preliminary expense (surveys, foundation investigations and plans)	$ 41,265.66
Rights of way	13,670.75
Construction costs	5,152,859.36
Engineering expense	157,235.31
Interest in connection with temporary financing	68,111.08
Legal opinions on bonds	1,000.00
Miscellaneous expense	1,725.32
Total	$5,435,867.48

The change from the basis of financing originally planned to the basis finally used resulted in a saving in interest charges amounting to approximately $1,800,000.

PLANNING SURVEY

There are many otherwise well informed people who do not, even now, correctly understand the state highway system of Oregon. The Oregon state highway system may be compared to a great public corporation, each motor vehicle owner being a stockholder. The board of directors is the legislature, the president of the board is the Governor. The managing officers are the State Highway Commission. Since the board of directors meets only every two years, it must manifestly give relatively large discretionary powers to the Highway Commission. The legislature, however, determines the annual revenue for road purposes and outlines the broad policies for the guidance of the Commission in the best interest of the stockholders of the corporation.

First of all, in order to keep the corporation solvent, they must provide for its fixed expense which includes payments on bond principal and interest, funds for maintenance, administration and certain unavoidable construction expense relating to the reconstruction of old bridges and worn-out surfacings. The principals of highway economics require provision for additional highway facilities arising through growth and development in population, business and transportation. The construction funds are provided in the main by the matching of federal funds for highway construction under the federal aid plan. Under the last act, these funds will be available not only on primary roads but also on secondary roads.

Expressed in another way the Federal Government and the Highway Commission build the roadbed, the Highway Commission maintains the roadbed and the stockholders in the corporation operate their motor vehicles over the highway system for both pleasure and business. Now as long as the expenditures are made along well planned, economical lines, it is a profitable business to the stockholders. The stockholder purchases his stock through the payment of motor vehicle fees and gasoline taxes, and he receives his dividends in the lowered cost of operation of his motor vehicle. As a citizen he receives even further dividends in the lowered cost of commodities through improved transportation facilities. Therefore, it is to his interest as a stockholder to carry on a conservative and well planned program of expansion and reconstruction of the highway system, as well as to have adequate maintenance, in order that he may save money in the cost of the transportation of passengers and commodities.

The Federal Government, since it makes available large sums for the construction of highways, is interested in the selection of projects and in the determination of the basic needs of transportation expansion. This can only be determined by a careful survey of existing conditions. In consequence, the Federal Government, through the Bureau of Public Roads, has sponsored a planning survey carried on jointly by the Bureau of Public Roads and the several states, three-fold in scope: First, to make an inventory of all roads, including federal, state and county roads, to determine their present condition and to make rough estimates of the cost of their improvement in proportion to the traffic that they can be reasonably expected to carry; second, to make a traffic survey to determine in detail the character, origin, destination, fluctuation and purpose of all traffic; third, to make a financial survey.

The financial survey will include a review of all data collected under the inventory and traffic surveys, a study of existing tax structures of

the several states and the determination of sound conclusions in answer to the following questions:

1. Who should pay for the highways; that is, how much should be paid by the road user and how much by real property? A study of the flow of rural and urban traffic to determine those roads and streets which have a general use by the motoring public and those which furnish a special use to special individuals, to determine the per cent of rural highway use by urban dwellers and the per cent of urban street use by rural dwellers, and, from those factors, to determine the percentage of total tax funds collected for road purposes that should be in equity allocated for state highway use, for city use and for county roads.

2. To determine an equitable adjustment of highway taxation between the various types of motor vehicles. In other words, how much of the portion of the requisite tax against highway users should private passenger cars pay and how much should represent the proportion to be collected from motor trucks and busses of various sizes.

3. To select economic yardsticks for the determination of the feasibility of the construction of various projects and the relative importance of the various road projects. In the main, the road system itself has to be self-liquidating; in other words, the transportation system must at least earn to the road users enough in savings in transportation cost to pay the fees and taxes required, otherwise the system will be bankrupt. Certain roads are large revenue producers, others are unquestionably subsidized by the main traffic arterials. While a certain amount of help must be given to the roads across expensive mountain country, where very little population and local traffic exists, in order to provide an integrated highway system, and, while certain assistance may be necessary for feeder roads to bring traffic to the main arterials, such assistance must be given only to the extent justified by the amount of traffic served, or, in the end, the tremendous maintenance expense of an over-extended system, improved to standards beyond transportation needs, will bring such a burden upon the road user that the bankruptcy and disintegration of the system may result.

Fortunately in Oregon the highway transportation system is now in a healthy condition, but it is well to plan for the future to avoid those pitfalls. One of the main objects of the planning survey is, therefore, the selection of an integrated system of primary and secondary state highways covering the main transportation needs of the state and the careful choice of projects for improvement in order of priority based on their economic worth.

Since such highly controversial subjects as the current manner of allocation of road funds between the respective governmental agencies and the equitable taxation of the individual motor transportation unit in proportion to road use cannot be decided in equity and justice without correct information, it is suggested that no drastic change be made in the present methods until the factual data of the highway planning survey is at hand. It is expected that the information will be available before the end of 1937. The planning survey is being made under the direction of John Beakey, traffic engineer.

ROADSIDE BEAUTIFICATION

In 1934, the Bureau of Public Roads initiated a program of roadside beautification and since that time has required that not less than 1 per cent of all federal funds allocated to the state be expended for this class of work. In consequence, the work begun in 1934 was continued during the years of 1935 and 1936, and has been extended in scope in the current highway construction program. Thus roadside improvement has been made an integral part of road construction. The natural scenic assets are carefully studied and plans for preservation of roadside beauty made during the progress of the field location of the highways. From this point on, it has been coordinated in the various phases of the department's functions. Saving of top soil, selective tree cutting, rounding of slopes, seeding and planting are thus part of the general plan.

It has been the Oregon plan, wherever possible, to make the landscape treatment conform to the larger natural setting and to employ as nearly as possible those trees and shrubs native to the immediate vicinity. The roadside improvement heals the scars made by construction so as to quickly restore the far-famed natural beauty of the Oregon roadsides. In general, formal planting has been discouraged save and except at the entrances to cities, which plantings blend in with the formal plantings of the private gardens.

Attempts have been made by the department in cooperation with the Roadside Council and the various garden clubs to interest the roadside residents in the improvement of their property to make Oregon roadsides even more attractive. It is thought that in addition to the charm that such care of the roadside brings, there is a definite monetary value in increasing the attraction of the Oregon roads to the tourists of the nation.

The roadside beautification work is being carried out under the supervision of George H. Otten, landscape architect.

TRAVEL AND INFORMATION BUREAU

Pursuant to authority granted it by the Thirty-eighth Legislative Assembly, the State Highway Commission organized, in 1935, a travel and information bureau, for the purpose of attracting additional tourists on Oregon highways. Approximately $48,000 was expended in 1936 in an advertising and publicity program which set forth the scenic and recreational attractions of this state. More than 234,000 booklets depicting in convincing fashion the attractions of this state by word and illustration were printed and distributed during 1936. More than 1,000 traffic-directing agencies asked for and were supplied with these booklets and maps during that year. Thirty-eight thousand people wrote to the department for information guiding them in making plans for a trip to Oregon. It is expected that not less than 50,000 such requests will be received during 1937.

The stimulation of tourist business in this state was noticeably evident and, no doubt, in a large measure was due to the activities of the Travel and Information Department. This brought a direct return to the state of Oregon in an increased gasoline tax yield and a major benefit to the state at large through the expenditures by visitors from other states and countries. Careful estimates compiled from direct inquiries indicate that the

visitors of last year to this state consumed gasoline yielding a tax of not less than $750,000. It is estimated that the tax yield to the state highway fund from tourists next year will equal at least $1,000,000. This is a material sum and will serve to build more roads to attract more tourists in addition to serving the commercial interests of this state.

It has been estimated that the total tourist business of the state was equal to approximately $35,000,000 during 1936. This is approximately equal to the value of the wheat crop. Of this amount approximately $18,000,000 was received from tourists who visited the state in private automobiles.

The highways of Oregon are the show windows of the state, and when they are properly cared for, when the roadsides are properly improved and when recreational facilities are provided, they bring to the state an enormous tourist crop.

To assist in directing the activities of this new department, headed by Harold B. Say, the Highway Commission appointed a board consisting of 12 men to advise the Commission on this new plan. The personnel of this board is made up of the following men: Judge Robert W. Sawyer, Chairman, Bend; Raymond B. Wilcox, Portland; Donald T. Sterling, Portland; John A. Laing, Portland; Dr. E. B. McDaniel, Portland; Robert W. Ruhl, Medford; Frank Jenkins, Klamath Falls; Hugh Ball, Hood River; Ed. W. Miller, Marshfield; R. R. Cronise, Albany; Merle R. Chessman, Astoria; and Chas. H. Reynolds, La Grande. The Commission wishes to acknowledge its thanks for the assistance of this board in setting up a department that has functioned so well in the interest of the people of this state.

BRIDGE OVER COOS BAY ON OREGON COAST HIGHWAY AT NORTH BEND

PART TWO

Report

OF THE

State Highway Engineer

TO THE

State Highway Commission

OF THE

State of Oregon

1935-1936

R. H. BALDOCK, State Highway Engineer

LETTER OF TRANSMITTAL

Salem, Oregon, January 1, 1937.

To the Honorable State Highway Commission:

HENRY F. CABELL, Chairman.

E. B. ALDRICH, Commissioner.

F. L. TOU VELLE, Commissioner.

Gentlemen:

I have the honor to submit to you herewith the report of the State Highway Engineer for the period July 1, 1934, to June 30, 1936.

Respectfully yours,

R. H. BALDOCK,

State Highway Engineer.

PART TWO

Report of the

State Highway Engineer

TO THE

State Highway Commission

1935-1936

This report covers the biennial period from July 1, 1934, to June 30, 1936. Tabular statements are given herein of the revenues and expenditures during this period, estimated revenues and requirements for the ensuing two years, and brief comments regarding the work accomplished by the various branches of the department during the past biennium. Statistical information for the years back to 1917 will be found in Part Three of this report.

REVENUES AND EXPENDITURES

The sources of revenue and the amounts received from these sources during the period from July 1, 1934, to June 30, 1936, were as follows:

State funds	$28,630,217.25*
County funds	307,695.81
Federal government funds	9,491,302.06
Miscellaneous cooperative funds	13,152.59
	$38,442,367.71

* Includes $7,129,817.03 of state highway bonds, of which all but $2,863,283.86 were short term bonds of six months or less. All bond sales were made necessary by the method used in financing the Coast Highway Bridge Project, which method is fully explained hereinafter under the heading "Coast Highway Bridges".

The expenditures for highway purposes during the biennium, including the Coast Highway PWA bridge projects, were grouped in the following classes:

Classification	Expended July 1, 1934, to June 30, 1935	Expended July 1, 1935, to June 30, 1936	Total Expended July 1, 1934, to June 30, 1936
New construction (primary highways)	$ 3,551,226.24	$ 5,091,450.98	$ 8,642,677.22
Construction (secondary highways)	1,161,461.02	789,373.11	1,950,834.13
Major additions and betterments	2,183,193.00	2,171,326.78	4,354,519.78
Special maintenance	141,071.38	163,080.55	304,151.93
Cooperation in forest road work	1,453.53	284,465.05	285,918.58
Minor additions and betterments	198,250.04	164,948.75	363,198.79
General maintenance (primary highways)	1,817,916.04	1,966,008.07	3,783,924.11
General maintenance (secondary highways)	478,133.80	543,473.49	1,015,607.29
Operation of drawbridges and ferries	137,062.37	134,159.75	271,222.12
Rights of way, maintenance stations, etc.	151,782.19	449,575.36	601,357.55
State parks	13,095.63	60,888.64	73,984.27
Equipment and supplies (holding account)	†101,792.68	† 61,357.90	* †163,150.58
Miscellaneous holding accounts	46,235.61	† 16,270.51	29,965.10
Maturities on bonds	2,175,000.00	6,412,500.00	8,587,500.00
Interest on bonds	1,239,231.26	1,170,607.81	2,409,839.07
Administration and supervision	259,485.14	322,693.62	582,178.76
Surveys (primary highways)	133,089.74	213,447.35	346,537.09
Surveys (secondary highways)	30,192.85	29,891.35	60,084.20
Engineering county construction	2,341.80	745.26	3,087.06
Travel and information bureau	.....	44,491.35	44,491.35
Miscellaneous general expense	39,275.68	95,460.05	134,735.73
Total highway purpose expenditures	$13,651,704.64	$20,030,958.91	$33,682,663.55

* Credits for rentals and depreciation on state-owned equipment have exceeded disbursements by this amount.

† Credits.

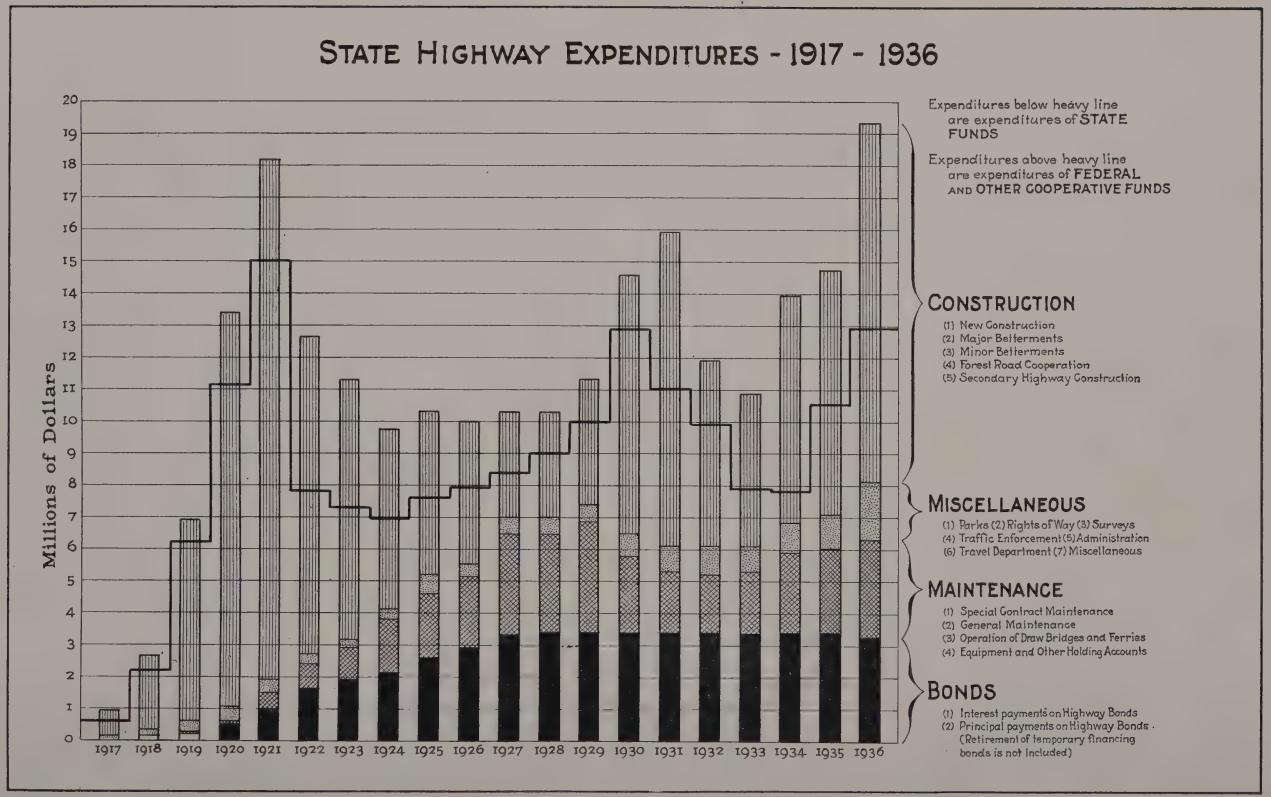
The total disbursements for all purposes were as follows:

Classification	July 1, 1934, to June 30, 1935	July 1, 1935, to June 30, 1936	Total
For state highway purposes as shown in detail above	$13,651,704.64	$20,030,958.91	$33,682,663.55
Contributions to counties as required by law	1,541,852.76	1,600,000.00	3,141,852.76
Contributions to state police department as required by law	273,963.62	287,751.00	561,714.62
Contributions to state general fund as required by law	.....	121,121.52	121,121.52
Totals	$15,467,521.02	$22,039,831.43	$37,507,352.45

The various sources of revenues and the amounts of the receipts therefrom were as follows:

Classification	Receipts July 1, 1934, to June 30, 1935	Receipts July 1, 1935, to June 30, 1936	Total Receipts July 1, 1934, to June 30, 1936
1. State Funds:			
Bond sales (short-term bonds for coast bridges)	$ 2,000,000.00	$ 2,236,533.17	$ 4,236,533.17
Bond sales (20-year bonds for coast bridges)	.....	2,893,283.86	2,893,283.86
Motor vehicle license fees	1,996,454.82	2,627,122.97	4,623,577.79
Gasoline tax	7,245,443.36	8,365,651.77	15,611,095.13
Motor transportation fees	734,277.36	492,894.44	1,227,171.80
Interest on bank balances (coast bridges)	740.06	270.80	1,010.86
Interest on accounts receivable	39.76	17.28	57.04
Fines for traffic law violations	15,544.79	21,942.81	37,487.60
Total of state funds	$11,992,500.15	$16,637,717.10	$28,630,217.25
2. Cooperative Funds:			
Federal aid	$ 4,593,525.05	$ 3,697,602.94	$ 8,291,127.99
Federal PWA grant (coast bridges)	.....	1,200,174.07	1,200,174.07
County cooperation	158,133.24	149,562.57	307,695.81
Miscellaneous cooperation	3,152.59	10,000.00	13,152.59
Total of cooperative funds	$ 4,754,810.88	$ 5,057,339.58	$ 9,812,150.46
Grand total receipts	$16,747,311.03	$21,695,056.68	$38,442,367.71
Balance on hand, July 1, 1934			2,313,650.38
Total available funds, July 1, 1934, to June 30, 1936			$40,756,018.09
Total disbursements from above table			37,507,352.45
Balance on hand, June 30, 1936			$ 3,248,665.64

The close of the year 1936 terminates the twentieth year since the adoption of the state highway plan and program of 1917. The gross expenditures of the Commission, including the Coast bridge PWA projects, during the 20-year period have been $231,384,678.42, of which $15,606,540.68 were county funds, $35,322,019.53 were government funds, $179,780,377.47 were state funds, and $675,740.74 were contributions from miscellaneous sources. Of the state funds expended, the sum of $53,084,039.37 has been used in the payment of principal and interest on bonded indebtedness. During the 19-year period ending December 31, 1935, there has been a total expenditure by the Bureau of Public Roads of $19,496,319.88 for construction and maintenance of forest roads on the state highway system. Of this total forest road expenditure, $12,131,607.31 were federal forest road funds, $2,177,222.81 were county cooperative funds, and $5,187,489.76 were state cooperative funds.


STATE HIGHWAY EXPENDITURES - 1917 - 1936
Millions of Dollars
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1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936
Expenditures below heavy line are expenditures of STATE FUNDS
Expenditures above heavy line are expenditures of FEDERAL AND OTHER COOPERATIVE FUNDS
CONSTRUCTION
(1) New Construction
(2) Major Betterments
(3) Minor Betterments
(4) Forest Road Cooperation
(5) Secondary Highway Construction
MISCELLANEOUS
(1) Parks (2) Rights of Way (3) Surveys
(4) Traffic Enforcement (5) Administration
(6) Travel Department (7) Miscellaneous
MAINTENANCE
(1) Special Contract Maintenance
(2) General Maintenance
(3) Operation of Draw Bridges and Ferries
(4) Equipment and Other Holding Accounts
BONDS
(1) Interest payments on Highway Bonds
(2) Principal payments on Highway Bonds - (Retirement of temporary financing bonds is not included)

ESTIMATES OF INCOMES AND DISBURSEMENTS FOR 1937 AND 1938

Assuming that the financing of state highway operations is to continue on the same basis as provided for by present laws and that there will be no change in the basis of allocating motor vehicle revenues, the incomes and disbursements for state highway purposes, during the calendar years 1937 and 1938, are estimated as follows:

Classification	1937		1938	
	Gross	Net	Gross	Net
Income:				
Motor vehicle and driver's license fees	$ 3,100,000	$ 2,750,000	$ 2,860,000	$ 2,580,000
Gasoline tax (exclusive of refunds which amount to approximately $1,300,000 per year)	9,500,000	9,470,000	9,750,000	9,720,000
Motor transportation fees	1,200,000	930,000	1,425,000	1,130,000
Fines for traffic law violations	20,000	20,000	20,000	20,000
County cooperation on completed work	85,000	85,000	85,000	85,000
PWA coast bridge grant funds	299,000	299,000	.....	.....
Other federal funds	6,843,000	6,843,000	3,810,000	3,810,000
Sub-totals	$21,047,000	$20,397,000	$17,950,000	$17,345,000
Less contributions to counties and state police department	.....	1,920,000	.....	1,920,000
Total income for state highway purposes	.....	$18,477,000	.....	$15,425,000
Estimated balance in highway fund, beginning of year	.....	474,000	.....	646,000
Estimated balance in coast bridge fund, beginning of year	.....	208,000	.....	.....
Total funds available for highway purposes	$	$19,159,000	$	$16,071,000
Requirements and Proposed Expenditures:				
a. **Debt Service (Mandatory):**				
Bond principal and interest	$	$ 3,283,000	$	$ 3,176,000
b. **Maintenance and Operating Expense (Mandatory):**				
Primary highway maintenance	.....	2,600,000	.....	2,600,000
Secondary highway maintenance	.....	600,000	.....	600,000
Operation of drawbridges and ferries	.....	25,000	.....	25,000
State parks	.....	100,000	.....	100,000
Administration and supervision	.....	350,000	.....	350,000
Travel and information bureau	.....	100,000	.....	100,000
Miscellaneous expense and legislative authorizations	.....	60,000	.....	60,000
c. **Construction Items (Mandatory):**				
To complete 1935-36-37 federal programs	.....	5,588,000	.....	.....
To complete coast bridge projects	.....	109,000	.....	.....
To complete PWA highway program	.....	1,002,000	.....	.....
Forest highway cooperation	.....	100,000	.....	100,000
Construction work ineligible for federal aid, primary highways	.....	471,000	.....	250,000
Mandatory construction on secondary highways	.....	300,000	.....	250,000
Minor betterment work	.....	200,000	.....	200,000
Contingencies	.....	75,000	.....	75,000
d. **Reserves (Mandatory):**				
Reserve to avoid deficit October 1	.....	646,000	.....	655,000
e. **Discretionary Expenditures:**				
Rights of way and surveys for federal programs	.....	550,000	.....	500,000
Cooperation in 1938 federal program	.....	3,000,000	.....	2,115,000
Cooperation in 1939 federal aid program	.....	.....	.....	4,915,000
Totals	$	$19,159,000	$	$16,071,000

Eliminating federal funds, county funds, coast bridge funds and carry-overs, the following table illustrates the relationship between current income and outgo of state funds for a typical year:

	Gross	Net
Income:		
Motor vehicle and drivers' license fees	$ 3,100,000.00	$ 2,750,000.00
Gasoline tax (exclusive of refunds)	9,500,000.00	9,470,000.00
Motor transportation fees	1,200,000.00	930,000.00
Fines for traffic law violations	20,000.00	20,000.00
Sub-totals	$13,820,000.00	$13,170,000.00
Less contributions to counties and state police department		1,920,000.00
Net income for state highway purposes		$11,250,000.00
Requirements:		
a. **Fixed Requirements:**		
Bond interest and principal		$ 3,300,000.00
Primary highway maintenance		2,600,000.00
Secondary highway maintenance		600,000.00
Operation of drawbridges and ferries		25,000.00
Maintenance of parks		100,000.00
Mandatory secondary highway construction		100,000.00
Minor betterment work		200,000.00
Administration and supervision		350,000.00
Reconstruction of worn-out pavement and bridges (including right of way and surveys for same)		500,000.00
Legislative authorizations and miscellaneous		50,000.00
Travel and information bureau		75,000.00
Contingencies		100,000.00
Total of fixed requirements		$ 8,000,000.00
b. **Required to Take Up Federal Aid:**		
To take up regular federal aid funds		$ 1,450,000.00
To take up secondary highway funds		300,000.00
To take up grade separation funds		75,000.00
To take up federal lands highway funds		75,000.00
To cooperate in forest highway program		100,000.00
To provide right of way		350,000.00
To make surveys and plans		200,000.00
Total to take up federal aid		$ 2,550,000.00
Net annual requirement		$10,550,000.00
Excess of net annual revenue over net annual requirement		$ 700,000.00

The $700,000 excess of income over minimum requirements is available to supplement the federal aid program of highway construction and reconstruction work and to apply upon the many millions of dollars of highway improvement work remaining to be done to bring the present primary and secondary systems of state highways to a reasonably satisfactory state of improvement. With a continuation of this excess of income over minimum requirements, and with a continuation of federal aid on the basis now obtaining, completion of the present primary and secondary state highways to present-day standards may be expected in approximately 16 years.

PROGRESS IN HIGHWAY IMPROVEMENT

The mileages of work performed under the direct supervision of the Highway Commission during the calendar years 1935 and 1936 were as follows:

Classification of Work	Primary (Miles)	Secondary (Miles)	County (Miles)
a. **New Construction Work:**			
Concrete paving	8.3	1.2	1.3
Bituminous paving	0.1	0.7	13.3
Bituminous macadam wearing surface	35.6	6.8	8.9
Oil treatment	256.0	97.5	61.3
Crushed rock surfacing	47.6	70.4	18.9
Grading	39.6	78.7	23.2
b. **Resurfacing, Widening, Etc.:**			
Pavement widening and resurfacing	75.1	1.4	5.8
Oil treatment	11.5	3.0	.....
Crushed rock resurfacing	183.3	.....	17.5
Regrading and widening	125.3	.....	15.4

At the close of 1936, the entire primary system of state highways includes 4,739 miles, and the status of its improvement is as follows: 872 miles paved; 877 miles surfaced with bituminous macadam; 1,718 miles surfaced with oil macadam; 780 miles surfaced with rock or gravel surfacing; 324 miles graded; 168 miles unimproved.

The mileages of the different classes of work performed on the primary state highway system since the beginning of state highway construction in 1913, are as indicated in the following table:

Kind of Work	Constructed by Highway Commission (Miles)	Constructed by Bureau of Public Roads (Miles)	Total (Miles)
New Construction Work:			
Paving	791	.....	791
Bituminous macadam	802	159	961
Rock and gravel surfacing	2,764	670	3,434
Grading	3,167	657	3,824
Betterment Work:			
Pavement resurfacing and widening	216	.....	216
Non-skid treatment	441	.....	441
Oiling	2,254	.....	2,254
Resurfacing	1,145	21	1,166
Regrading	948	49	997

The present status of improvement of each of the state highway routes is shown in a tabulation given in Part Three of this report.

An active construction program was carried on throughout the biennium financed through federal funds augmented when necessary by the limited state funds available. This construction program, with respect to the number of projects, was one of the largest ever carried on by the department, and funds were distributed throughout the various counties of the state and among the various highways in relatively small construction units in order to meet unemployment needs.

MIDLAND GRADE SEPARATION, KLAMATH FALLS-WEED HIGHWAY AND SOUTHERN PACIFIC TRACKS, KLAMATH COUNTY

GRADE SEPARATION, WALLOWA LAKE HIGHWAY AND UNION PACIFIC TRACKS IN LA GRANDE

Bridge Construction:

In addition to the improvements expressed on a mileage basis, the Highway Commission has constructed during the biennium 74 bridge structures of lengths varying from 20 feet to 5,337 feet and having an aggregate value of $7,650,000.

Included in the above 74 bridges were 20 grade separation structures and the five Coast Highway bridges. The latter were financed and constructed in accordance with Public Works Administration regulations. A more detailed description of the Coast bridge projects is given elsewhere in this report under the title "Oregon Coast Highway Bridge Program". The 20 grade separation projects are detailed in the table which follows:

	Description of Project	Estimated Cost
1.	Over Oregon Electric tracks near south city limits of Portland	$ 25,582.26
2.	122d avenue (Buckley road) under the Union Pacific tracks near Portland	77,100.00
3.	162d avenue (Barker road) under the Union Pacific tracks near Portland	50,500.00
4.	102d avenue (Craig road) over the Union Pacific tracks near Portland	85,200.00
5.	Halsey street (Barr road) over the Union Pacific tracks near Portland	79,700.00
6.	Columbia River highway under the United Railways tracks near Portland	48,300.00
7.	Pacific highway under the Southern Pacific tracks at Milwaukie	31,200.00
8.	Beaverton-Aurora secondary highway under the Oregon Electric tracks near Metzger	17,757.00
9.	Junction City-Eugene secondary highway over the Southern Pacific tracks near Eugene	77,100.00
10.	Pacific highway over the Southern Pacific tracks near Roseburg	34,000.00
11.	Oregon Coast highway over the Southern Pacific tracks at North Bend	24,400.00
12.	Columbia River highway over the Union Pacific tracks near The Dalles	157,100.00
13.	Columbia River highway over the Union Pacific tracks and Spanish Hollow creek near Biggs	68,100.00
14.	Warm Springs secondary highway over the Union Pacific tracks near Madras	17,600.00
15.	The Dalles-California highway under the Oregon Trunk tracks in Bend	89,300.00
16.	Klamath Falls-Weed highway over the Great Northern tracks and the Klamath river near Klamath Falls	165,300.00
17.	Klamath Falls-Weed highway over the Southern Pacific tracks near Midland	30,800.00
18.	Klamath Falls-Lakeview highway over the O. C. & E. tracks near Dairy	39,800.00
19.	Klamath Falls-Lakeview highway under the O. C. & E. tracks near Olene	33,880.00
20.	Wallowa Lake highway under the Union Pacific tracks in La Grande	96,200.00

Aside from the Coast bridges and grade separation projects, the larger and more notable of the bridge projects completed during the two-year period are as follows:

1. Composite trestle bridge over Smith river channel of Umpqua river near Reedsport. Length 1,566 feet.
2. Composite trestle bridge over Chehalem creek on West Side Pacific highway at Newberg. Length 812 feet.
3. Concrete arch bridge over Clackamas river at Estacada. Length 381 feet.
4. Three steel tied arch spans over Eagle creek on the Columbia River highway near Bonneville. Length 460 feet.
5. Concrete bridge over Umatilla river on Old Oregon Trail at Pendleton. Length 330 feet.

Primary Highway System:

Material progress has been made in closing the gaps on the uncompleted federal aid highways and revising to modern standards those sections of heavily traveled arterials having tortuous and obsolete alignment.

Central Oregon Highway, Oregon No. 54—The Central Oregon Highway has been graded across Stinkingwater Mountain and a grading and topping contract is under way for the section across the Harney Valley which is the final link in the completion of the roadbed. The first contracts have been awarded for an oil macadam surfacing as the initial step to give as soon as possible a dustless, all-weather surface for this important transstate arterial. During the past two calendar years contracts totaling an expenditure of $400,245 have been awarded.

South Santiam Highway, Oregon No. 54—The South Santiam Highway has been continuously advanced in successive contracts easterly from Cascadia by federal aid highway funds expended under the supervision of the State Highway Department, and westerly from the summit at Hogg Pass by forest highway funds under the direction of the Bureau of Public Roads. There remains a relatively short gap to open this road for traffic. During the past two calendar years contracts involving a total expenditure of $462,445 have been awarded.

Pacific Highway, U. S. No. 99 (including both U. S. 99E and U. S. 99W between Junction City and Portland—The Pacific Highway carries the heaviest traffic in the state of Oregon. For some time it has been the objective of the Oregon State Highway Commission to modernize this great traffic arterial to eliminate hazard and to save time and expense in the transportation of passengers and commodities. Among the accomplishments during the past biennium has been the revision of the 10-mile section between Ashland and Siskiyou Station. This revision will save 3.45 miles of distance and eliminate 5,200 degrees of curvature, or 15 complete circles. The work has been carried on under successive contracts and the entire section will be paved and ready for traffic by the midsummer of 1937. This is one of the most modern mountain locations in the west and will materially decrease the cost of transportation over the great mountain barrier between Oregon and California. The Shady Point-Kelly Corner section, consisting of 2.26 miles of grading, topping and overhead crossing south of Roseburg, has been practically completed. The contract for paving will be awarded in the near future. The Turkey Hill section north of Oakland has been graded and paved. The Junction City-Eugene section, paralleling the Oregon Electric Railway between these towns, has the grading and paving completed between Junction City and the connection with the Siuslaw Highway and the grading and partial paving between Awbrey and Eugene. That section of 99W over the Rex Hill, including the south entrance to Newberg, has been modernized. This makes a connection with the four-lane entrance into Portland on the Barbur Boulevard. The 5.45-mile section of the Pacific Highway immediately south of Salem, between Pringle Creek and Illahe School, has been graded and the contract has been awarded for paving. The four-lane underpass at the North Salem city limits will eliminate a very hazardous grade crossing with the main line of the Southern Pacific railroad. This improvement will be open for traffic early in the spring of 1937. Other sections on 99E include the completion of the four-lane pavement between

Oregon City and Milwaukie and the improvement to the south entrance of Oregon City, involving the widening of the grade and the reconstruction of the underpass. It likewise involves the extension of the four-lane highway into Portland from Seventeenth Avenue and Schiller Street to Union Avenue. This improvement includes a long viaduct over the Southern Pacific tracks immediately south of Union Avenue. The entire project will be completed early next summer and will enable traffic from the south to avoid much of the present congestion on entering Portland. During the past two calendar years contracts involving an expenditure of $2,296,245 have been awarded.

The Old Oregon Trail and Columbia River Highway, U. S. No. 30—The extensive line revision between Durkee and Huntington which has been under way since 1932 will be completed by early next summer, affording a modern highway through this tortuous canyon. The Emigrant Hill section over the Blue Mountains has been further stabilized by two contracts, one of which was finished in the fall of 1936 and the other is well under way and should be completed early in the summer of 1937. The completion of these projects will complete the stabilization of the foundations of the Emigrant Hill section and minimize the necessity for load limits during the spring months. The construction of the Stanfield-Pendleton Cutoff is under way with two contracts having been finished and the remaining one well started. This improvement will eliminate the crooked alignment along the Umatilla river. The economies in operating cost by the savings in distance and curvature will amortize the cost of this project within not to exceed five years. The Columbia River Highway is being improved by the construction of the Bonneville-Eagle Creek section. The west entrance to The Dalles was constructed during 1935 and the realignment of the overcrossing at Big Eddy during 1934. The dangerous grade crossing in Pendleton was eliminated with an overhead structure within the city limits. Progress is being made in modernizing the Lower Columbia River Highway between Portland and Rainier. During the past two calendar years contracts involving an expenditure of $1,850,350 have been awarded.

Fremont Highway, Oregon No. 31—Surfacing on two important units of the Fremont Highway was completed in 1935 with cutback road mix surface. Rapid strides are being made to complete the oiling of this connection with Lake county. During the past two calendar years contracts involving an expenditure of $240,940 have been awarded.

Willamette Highway, Oregon No. 58—The work on the Willamette Highway during the past biennium includes the completion of the Gold Lake Trail-Odell Lake section and the partial completion of the Salt Creek-Gold Lake Trail section by the State Highway Department while the Bureau of Public Roads has advanced construction easterly from McCredie Springs with forest funds. Rapid progress is now being made toward the completion of this road. During the past two calendar years contracts involving an expenditure of $578,390 have been awarded.

Oregon Coast Highway, U. S. No. 101—The major activity on the Oregon Coast Highway during the past biennium has been the construction of the five coast bridges which are described more fully elsewhere in this report. A second major item of expenditure was the building of the approaches to the bridge structures proper. This work included the approach to the Umpqua River bridge, involving a very deep cut through

Bolon island and the building of a long trestle across the Smith River channel. Among the construction items was included the landscaping of the bridge heads in keeping with the beautiful bridge structures along this scenic drive. That section between Cannon Beach and Manzanita has been furthered by the completion of two grading projects in Tillamook county and the construction of the Arch Cape tunnel in Clatsop county. The tunnel contract will be completed soon after the first of the new year. Contracts let to date for the Cannon Beach-Manzanita Junction section total $416,000. There remain 3.5 miles of grading and the construction of the Necarney Creek bridge, in addition to the surfacing, to open up this beautiful stretch of Oregon coast line. Incidentally the construction will also save approximately nine miles in traversing the Oregon Coast Highway. During the past two calendar years, contracts involving an expenditure of $818,188 have been awarded, all being in addition to the contracts for the five Coast Highway bridges which are described elsewhere.

Wolf Creek Highway, Oregon No. 2—The Wolf Creek Highway was opened to traffic between Necanicum junction and Elsie during the summer of 1935 and three contracts have since been awarded east of the Nehalem river. The balance of the grading between Quartz Creek and Sunset Camp has been undertaken by the Works Progress Administration organization with the cooperation of the State Highway Department in furnishing certain equipment, powder and engineering supervision. The WPA organization is also at work on a short section between the Multnomah county line and Barnes road at the easterly end of the highway. Contracts awarded by the Highway Commission to the end of 1936 on the Wolf Creek Highway total $1,253,000 and the WPA has allocated for the clearing and grading work on the sections above referred to the amount of $2,135,000.

Wilson River Highway, Oregon No. 6—The Wilson River Highway has been graded from near Tillamook to Jordan Creek, a distance of 18 miles, and the surfacing of the remaining portion of this section is now well under way. The WPA has undertaken the construction with relief labor of a large part of the grading between Jordan Creek and Glenwood. A total of $535,000 has been contracted by the State Highway Commission to the end of 1936 on the Wilson River Highway and $1,846,000 has been allocated out of WPA funds for grading work on this project.

Ochoco Highway, U. S. No. 28—Improvement of the Ochoco Highway east of Prineville has been started. The Prineville-Ochoco Dam section has been completed and the Ochoco Dam-Mill Creek section has been awarded and is now under way. During the past two calendar years, contracts involving an expenditure of $151,476 have been awarded.

John Day Highway—The John Day Highway is known as U. S. 28 to Dayville and State Route No. 19 from Dayville to Arlington. During the past two calendar years contracts involving an expenditure of $398,591.60 have been awarded.

The Dalles-California Highway—The Dalles-California Highway is known as Oregon No. 23 from The Dalles to Maupin, No. 50 from Maupin to the junction with the Sherman highway, and U. S. No. 97

from that point to the California line. One of the most important projects that has been under way during the past biennium on The Dalles-California Highway is the modernization of that section between Redmond and Bend. The grading, topping and surfacing have been carried on under successive contracts and it is expected that the project will be completed early in the summer of 1937. The southern extension of The Dalles-California Highway, known as the Klamath Falls-Weed cutoff between Klamath Falls and the California state line has been completed and opened to traffic. This is a very important interstate connection. This road was built over the old lake beds south of Klamath Falls and on ground which is very swampy in places. Foundations up to two feet in thickness were constructed, giving a very solid roadbed to handle the heavy traffic that will later develop on this arterial highway. During the past two calendar years, contracts involving an expenditure of $568,027 have been awarded.

The Wallowa Lake Highway, Oregon No. 82, saw extensive improvements during the past biennium. The road is now entirely oiled to Joseph with the exception of a short section near Wallowa, which construction was held up pending litigation over right of way. The grade crossing at the intersection of this road and the main line of the Union Pacific railway in the city of La Grande was eliminated with an underpass during 1935. During the past two calendar years, contracts involving an expenditure of $380,493 have been awarded.

Pendleton-John Day-Burns-Lakeview Highway, U. S. No. 395—Substantial improvement was made in the construction to modern standards of U. S. Route No. 395, running from Pendleton through John Day and Burns to Lakeview. The grading of the section was completed and substantial progress made in the oiling of this road. This road was oiled between Nye and Ukiah and from Middle Fork to Long Creek and from Burns to Lakeview. During the past two calendar years, contracts involving an expenditure of $269,740 have been awarded.

Mt. Hood and Wapinitia Highway, Oregon No. 50—Improvements on this road consisted of the nonskid treatment of the pavement between Portland and Gresham and the regrading and building of a foundation and pavement between Clear Lake and Clear Creek. During the past two years, contracts involving an expenditure of $168,995 have been awarded.

Umpqua Highway, Oregon No. 38—Of the remaining 16-mile gap of unoiled road between Reedsport and Scottsburg, 8 miles (or approximately one-half) were improved with oiling during the past biennium. During the past two years, contracts involving an expenditure of $70,130 have been awarded.

Siuslaw Highway, State Route No. 36—Contracts were let for the grade widening and resurfacing of the unoiled portion between Triangle Lake and Swisshome, preliminary to the oiling of this section, when funds are available. During the past two years, contracts involving an expenditure of $93,225 have been awarded.

Corvallis-Newport Highway, State Route No. 26—Contracts were let for the grade widening and oiling of the remaining section of unoiled highway east of Toledo. During the past two years, contracts involving an expenditure of $163,535 have been awarded.

McMinnville-Tillamook Highway, State Route No. 14—Substantial progress was made in the grading and oiling of this road from Dolph to Hebo, employing forest highway funds.

Federal Lands Highways:

The I. O. N. Highway has been furthered by the construction of two sections, one easterly from Owyhee river, including a bridge over that stream, and another adjacent to the Idaho line, with a bridge over Sucker creek. This route crosses the largest area in the United States not served by improved roads.

The Warm Springs Highway has progressed with successive contracts by secondary and Federal Land funds until it has been entirely graded from Madras to the Warm Springs Agency and affords a much needed outlet for the reservation.

Secondary Highways:

Much progress has been made during the biennium in the improvement of secondary state highways, particular attention having been given to the oiling of highways of that class. Among the secondary highways on which noteworthy improvements have been made are the Salem-Dayton, the Nehalem, the Lexington-Echo, the Sherar's bridge, the Klamath Lake, the Alsea-Deadwood, the Butteville Road-Hubbard, the Halsey-Sweet Home, the Independence, the Williams, the Woodburn-Mt. Hood, the Nestucca and the Silver Creek Falls.

On the North Santiam Highway, which is a secondary state highway from Salem to Niagara, a county road from Niagara to Gates and a forest highway from Gates to the junction with the South Santiam Highway, grading work has been done by the U. S. Bureau of Public Roads, using federal forest highway funds, which completes the roadbed from Detroit to Hogg Pass, and opens to traffic this new and important route between the Willamette valley and the territory east of the Cascade mountains. Contracts awarded during the past two calendar years for construction work on this highway total $237,800.

An application has been made to the PWA for a grant of 45 per cent on a $1,000,000 secondary highway program which will consist of 17 projects on important secondary highways scattered throughout the state. Approval has been received, and construction is under way on three of these projects, and surveys have been made for the remainder, so that if, and when, funds are received, they can be contracted within a very short time.

County Roads:

Important county roads have in many sections of the state been improved with federal funds allocated for that purpose. This money was largely used to obtain a dustless surface either by paving or oiling on roads sufficiently improved to warrant such construction.

Reconnaissance Surveys:

The practice of making a thorough reconnaissance survey well in advance of the location survey has been carried on throughout the biennium in places where locations were being considered. These surveys are a careful study of the entire area and are complete with cost report

and map of the area showing the various possible lines. In addition to furnishing accurate cost data in advance of the final location, these surveys expedite the work of the locating party and enable the survey to be concentrated over a definite route. Such reconnaissance reports have been prepared between Roseburg and Grants Pass, Cascade Locks and The Dalles, Port Orford and Euchre Creek, Marshfield and Bandon, McMinnville to Valley Junction, Tillamook to Hebo, Pendleton to the Washington state line, Rome to Folleyfarm and McDermitt, and Modoc Point to Chiloquin.

Location Surveys:

The construction department through Chief Locating Engineer H. W. Libby has supervised the location surveys for all projects contracted during the biennium and several other major reconstruction surveys which will eventually be constructed by successive contracts. The major surveys are carried on by specialized locating parties and these surveys have included the realignment between Troutdale and Cascade Locks on the Columbia River Highway, the Siletz River and Newport on the Oregon Coast Highway, the Wilsonville cutoff between Wilsonville and Tigard, route through Oregon City, plans for the improvement of Front Street and Foothills Boulevard, Pendleton-Washington State Line section, Route "F" between Eugene and Florence, Territorial Highway between Lorane and Anlauf, the Flora-Washington State Line section, John Day Highway between Mt. Vernon and Spray, and Eighty-second Avenue between Portland and Oregon City.

Construction Practices:

Grading—The use of rounded and blended slopes in cuts with flatter back slopes along the turnpike sections has received increasing attention in order to reduce maintenance costs and to blend the roadbed section into the natural landscape. Experiments have been carried on under some contracts with the removal and replacing of topsoil in order to obtain data for the standardization of our practice to assist in the natural growth of grass and shrubs and avoid the undue expense of unnatural planting and fertilization.

Subbases—The use of subbases or rock ballast underneath all types of pavement and surfacing has been continued throughout all contracts, as those pavements already constructed on such basis are showing marked freedom from warping, curbing, joint deflection and displacement. The ballast ranges in thickness from 6 to 24 inches and covers the entire width of the subgrade.

Pavement Widths—Several sections of pavement have been constructed with a 22-foot width and one section of bituminous macadam with a section of 24-foot width. It is anticipated that the 22-foot width will evenually be adopted for future pavements in Oregon and that it will effect sufficient economies in the maintenance of shoulders to justify the additional width.

Alignment—Standards of grade and alignment based upon selected speeds have been adopted insuring an ample factor of safety against obsolescence and unforseen contingencies. These standards are divided

AT SOUTH END OF COOS BAY BRIDGE IN SIMPSON PARK, NORTH BEND

OREGON COAST HIGHWAY SKIRTING ALSEA BAY SOUTH OF WALDPORT, LINCOLN COUNTY

into three classes for use in valleys, on rolling hills and in mountainous country. A map of the state has been prepared showing the classes in which every primary and secondary highway has been segregated and a table prepared showing the widths of grading section for the various classes of highways.

The use of transition curves based upon the Talbot Spiral has been adopted as standard practice for all future alignment and a pamphlet published for use of the engineering department in connection with their use.

FEDERAL AID AND FEDERAL WORK RELIEF

During the period covered by this report, federal funds for highway construction purposes were apportioned to Oregon as follows:

Date of Congressional Act	Designation	Amount Appropriated	Oregon's Allotment
April 8, 1935	1936 WPH funds	$200,000,000.00	$ 3,038,642.00
April 8, 1935	1936 WPGS funds	200,000,000.00	2,334,204.00
June 18, 1934	1936 Regular federal aid funds	125,000,000.00	2,044,633.00
June 18, 1934	1936 Federal lands highway funds	2,500,000.00	174,331.00
June 18, 1934	1937 Regular federal aid funds	125,000,000.00	2,045,078.00
Totals		$652,500,000.00	$ 9,636,888.00

WPH Funds—On April 8, 1935, an act known as the Works Program act was passed by Congress, which act appropriated four billions of dollars to provide relief and work relief and to increase employment. Of this four billions of dollars, $400,000,000 was later allotted by the President to highway and grade crossing elimination projects to be constructed under the supervision of state highway departments and the U. S. Bureau of Public Roads. Of the $400,000,000 so allotted, $200,000,000 was assigned to highway projects and $200,000,000 to grade crossing elimination projects. Oregon's apportionments from these funds were $3,038,642 for highway projects and $2,334,204 for grade crossing elimination projects.

The more noteworthy of the provisions promulgated for the works program highway projects (WPH projects) were as follows:

1. Not less than 25 per cent of the available funds was required to be used on projects on secondary or feeder roads outside of municipalities and metropolitan areas and not included in either the state or federal-aid highway systems.

2. Not less than 25 per cent of the available funds was required to be used on projects within municipalities or metropolitan areas.

3. The state was required to furnish rights of way and plans and to bear the cost of certain other nonparticipating items of expense, but otherwise no financial cooperation on the part of the state was required.

The program financed with WPH funds consisted of 53 projects, of which 26 were on county roads and 6 were entirely within the limits of incorporated cities. Contracting of the projects began in August, 1935.

WPGS Funds—As stated above under the heading "WPH funds", Oregon's allotment of Works Program Grade Separation funds (WPGS

funds) amounted to $2,334,204. The more important of the provisions governing the work financed with these funds were as follows:

1. Not less than 25 per cent of the available funds was required to be used on projects on secondary or feeder roads.

2. The projects were required to be distributed among the railway companies in approximate proportion to the mileages of railway lines operated within the state.

3. The work was required to be performed without cost to the railway companies.

4. No financial cooperation was required of the state other than the furnishing of rights of way and plans and the payment of certain non-participating items of expense.

The projects included in this grade crossing elimination program were as follows:

County	Railway	Highway	Location
Clackamas	Southern Pacific	Pacific	In Oregon City
Deschutes	Oregon Trunk	The Dalles-California	In Bend
Douglas	Southern Pacific	Pacific	3 Miles South of Roseburg
Jackson	Southern Pacific	Pacific	12 Miles South of Ashland
Jefferson	O.-W. R. & N.	Warm Springs	Near Madras
Klamath	Southern Pacific	Klamath Falls-Weed	4 Miles South of Klamath Falls
Klamath	O.-C. & E.	Klamath Falls-Lakeview	Near Dairy
Klamath	O.-C. & E.	Klamath Falls-Lakeview	Near Olene
Lane	Southern Pacific	Pacific	1 Mile North of Eugene
Marion	Southern Pacific	Pacific	At Salem
Marion	Southern Pacific	Butteville-Hubbard	1 Mile North of Hubbard
Multnomah	Southern Pacific	East Portland-Oregon City	Union Avenue in Portland
Multnomah	United Railways	Lower Columbia River	6 Miles North of Linnton
Multnomah	O.-W. R. & N.	Craig Road	7 Miles East of Portland
Multnomah	O.-W. R. & N.	Buckley Road	8 Miles East of Portland
Multnomah	O.-W. R. & N.	Barker Road	10 Miles East of Portland
Multnomah	O.-W. R. & N.	Barr Road	6 Miles East of Portland
Sherman	O.-W. R. & N.	Columbia River	1 Mile East of Biggs
Umatilla	N. P. and O.-W. R. & N.	Old Oregon Trail	In Pendleton
Wasco	O.-W. R. & N.	Columbia River	Near Big Eddy
Washington	Oregon Electric	Beaverton-Aurora	Near Metzger

Regular Federal Aid Funds—Oregon's allotment of regular federal aid funds for the federal fiscal year 1936 (July 1, 1935, to June 30, 1936) was $2,044,633. For the fiscal year 1937 (July 1, 1936, to June 30, 1937) it was $2,045,078.

Allotments for the fiscal years 1938 and 1939 have not yet been made, but funds for the purpose have been authorized by the Hayden-Cartwright act approved by the President on June 16, 1936. The amount authorized is $125,000,000 per year. Oregon's proportion will be approximately $2,045,000 each year.

While definite amounts of regular federal aid funds are allotted to the states each year, those amounts do not come to the states without financial cooperation. In states containing no public lands, the federal aid on each project is limited to 50 per cent. In public land states, the

proportion of federal aid is dependent upon the proportion of public land in the state. In Oregon, the proportion of public land is such that the limit of federal aid is 61 per cent of the project cost. The federal government does not participate, however, in the cost of rights of way or in certain other items of expense which it classifies as "non-participating". These costs and items of expense are borne by the state in addition to its 39 per cent share of the net project cost, the result being that approximately 48 dollars of state money is required to take up each 52 dollars of federal money.

The regular federal aid program for the fiscal year 1936 included 39 projects. The regular federal aid program for the fiscal year 1937 includes 40 projects. The average cost of the 79 projects in the two programs is approximately $90,000.

It is expected that the allocation of the 1938 federal aid funds will be made early in 1937, and that contracting of the work which those funds will finance, will begin in March or April of 1937.

Federal Funds for Secondary Highways—The Hayden-Cartwright act of 1936, under which the regular federal aid authorizations for the fiscal years 1938 and 1939 were made, authorized, also, $50,000,000 for construction projects on secondary and feeder roads. Of this amount, it is expected that Oregon will receive approximately $400,000 for each of the fiscal years 1938 and 1939.

These funds will require matching by the state or by the counties on the same basis as regular federal aid funds.

Federal Funds for Grade Crossing Elimination—Under the same act which authorized funds for construction projects on secondary and feeder roads, $100,000,000 was authorized for grade crossing elimination projects during the fiscal years 1938 and 1939. Oregon's share of this authorization is expected to be approximately $585,000 for each of the two years. These funds will come to the state without financial cooperation other than the furnishing of required rights of way and the payment for certain other "nonparticipating" items of expense of comparatively small amount.

Federal Lands Highway Funds—From federal allocations made for the construction of highways across government-owned lands other than national forest lands, $174,331 was apportioned to Oregon for the fiscal year 1936 and apportionments of approximately equal amount will come to the state for each of the fiscal years 1938 and 1939. The use of this money is confined entirely to certain areas in Eastern Oregon, as only in those areas are there sufficient government-owned lands other than national forests, to make the use of the funds practicable.

The 1936 funds were expended on the following projects:

Jefferson county—2.1 miles of grading on the Agency section of the Warm Springs Highway.

Harney county—6.0 miles of surfacing and oiling on the Cinder Butte-Silver Creek section of the Lakeview-Burns Highway.

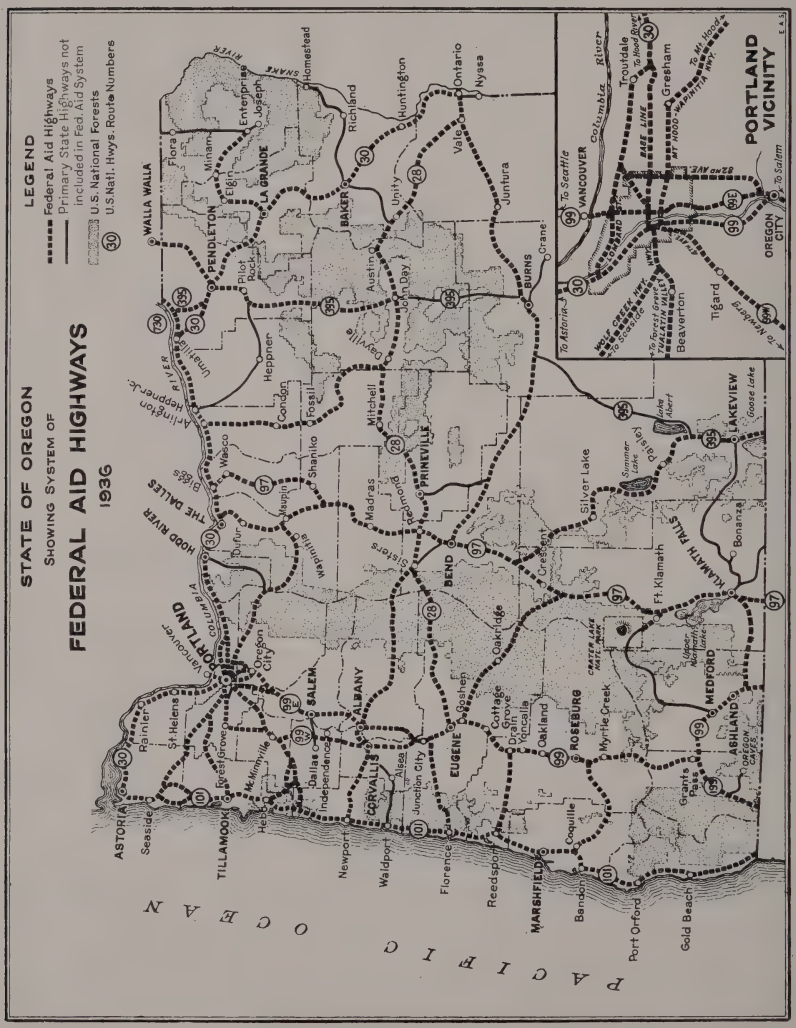
Harney county—0.6 miles of grading on the Nigger Flat section of the Central Oregon Highway.

Malheur county—0.7 miles of grading on the Chimney Creek-Juntura section of the Central Oregon Highway.

Malheur county—9.6 miles of grading on the West unit of the Jordan Creek section of the I. O. N. Highway.

The 1938 funds are expected to be available for contracting in the spring of 1937.

The regulations governing the use of federal lands highway funds require no direct financial cooperation from the state. However, the state is required to construct, at its own expense, such portions of federal lands projects as are on privately-owned lands.



MILEAGES OF FEDERAL AID HIGHWAYS

The mileages given in this table do not include mileages within cities and towns having populations of more than 2,500.

Federal Route No.	Highway	Total Federal Aid Mileage Inclusive of Miles Within Forests and Reservations	Federal Aid Mileage Within Forests and Reservations			Total Federal Aid Mileage Exclusive of Miles Within Forests and Reservations
			National Forests	Indian Reservations	Other Reservations	
1	Astoria to Ontario	501.03	27.76	22.90	① 1.84	448.53
2	Oregon Coast Highway	386.39	45.57	.....	② 0.29	340.53
3	Pacific Highway	326.59	7.53	.....	.....	319.06
4	The Dalles-California Highway	281.82	20.17	43.53	.....	218.12
5	Eugene to Ontario	389.00	78.74	.....	.....	310.26
6	Arlington to Rock Creek	124.13	.....	.....	.....	124.13
7	La Grande to Enterprise	66.01	.....	.....	.....	66.01
8	Heppner Junction to Pendleton③	.....	.....	.....	.....	.....
9	West Side Pacific Highway	106.86	.....	.....	.....	106.86
10	Albany-Corvallis Highway	10.05	.....	.....	.....	10.05
11	McMinnville-Tillamook Highway	48.68	13.95	.....	.....	34.73
12	Sherman Highway	69.03	.....	.....	.....	69.03
13	Ft. Klamath to Crater Lake	6.75	.....	1.00	.....	5.75
14	Coos Bay-Roseburg Highway	61.52	.....	.....	.....	61.52
15	Green Springs Highway	55.50	1.52	.....	.....	53.98
16	Fremont Highway	158.79	14.39	.....	.....	144.40
17	Redwood Highway	42.50	0.59	.....	.....	41.91
18	Umatilla-Wallula Highway	19.68	.....	.....	.....	19.68
19	Pendleton to Washington State Line	36.61	.....	.....	.....	36.61
20	Umpqua Highway	49.85	10.99	.....	.....	38.86
21	Bend to Burns	129.12	.....	.....	.....	129.12
22	Corvallis-Newport Highway	57.05	.....	.....	.....	57.05
23	Salmon River Highway	21.92	.....	.....	.....	21.92
24	Portland to Maupin	93.71	37.89	.....	.....	55.82
25	Siuslaw Highway	67.03	17.60	.....	.....	49.43
26	East Portland-Oregon City Highway	7.14	.....	.....	.....	7.14
27	Wolf Creek Highway	64.1	.....	.....	.....	64.1
28	Cannon Beach Road	21.8	.....	.....	.....	21.8
29	Willamette Highway	85.4	56.4	.....	.....	29.0
30	Pendleton to John Day	121.0	17.3	.....	.....	103.7
31	Burns to Vale	121.3	.....	.....	.....	121.3
32	Tualatin Valley Highway	42.1	.....	.....	.....	42.1
33	Klamath Falls-California Line	17.0	.....	.....	.....	17.0
34	Boyer to Dolph	5.6	4.9	.....	.....	0.7
35	Tillamook to Banks	53.0	.....	.....	.....	53.0
36	Pendleton-Cold Springs Highway	18.5	.....	.....	.....	18.5
37	Santiam Highway	103.1	55.8	.....	.....	47.3
38	Fourth Street Entrance to Portland	4.2	.....	.....	.....	④ 4.2
39	Base Line Road	10.82	.....	.....	.....	10.82
40	Lombard Street	3.00	.....	.....	.....	3.00
41	82nd Avenue	7.20	.....	.....	.....	7.20
	Totals	3,794.88	411.10	67.43	2.13	3,314.22
				480.66		

① Celilo Canal Reserve.
② Cape Perpetua Lighthouse Reserve.
③ Withdrawn from Federal Aid System.
④ Includes 2.44 miles in City of Portland.

PWA PROJECTS

The Highway Commission has made application to the Federal Emergency Administration of Public Works for assistance in financing 21 projects. The total cost of these projects is estimated to be $1,136,-540.41. The applications requested a federal participation of 45 per cent, leaving 55 per cent to be financed from state funds. Under this arrangement, $509,868.15 would be contributed by the federal government, and $626,672.26 by the state. The federal government has approved and the contracts have been let for three of these projects, namely: the State Wide Radio net work, the Alsea South Fork section of the Alsea-Deadwood Secondary Highway in Benton county, and the Miles Bridge section of the Baker-Medical Springs Secondary Highway in Baker county.

The following projects have not as yet been acted upon by the federal authorities:

County	Highway	Section and Description of Work
Secondary Highways:		
Washington	Tigard-Aurora	Barbur Boulevard-Lake Forest Section—2.8 miles grading and surfacing.
Columbia	Nehalem	Nehalem River Project—0.5 miles grading, surfacing and oiling.
Linn	Albany-Lyons	Fleming Ranch-Schindler Bridge Section—232-ft. bridge, 1.25 miles grading, surfacing.
Clatsop	Nehalem	Walluski River Bridge Project—486-ft. bridge, 0.95 miles grading, surfacing and oiling.
Yamhill	Salem-Dayton	Spaulding Corner-Unionvale Section—1.66 miles grading, surfacing and oiling.
Coos	Coos River	Catching Slough Bridge Project—940-ft. bridge, 600 ft. grading and surfacing.
Josephine	Williams	Powers Ranch-Powell Creek Section—2.78 miles grading, surfacing and oiling.
Jackson	Little Butte	Unit No. 4, McCallister Section—0.94 miles grading and surfacing.
Lane	Territorial	Monroe-Ferguson Section—2.5 miles grading, surfacing and oiling.
Umatilla	Sunnyside-Umapine	Sunnyside-Umapine Section—5.4 miles grading, surfacing and oiling.
Umatilla	Hermiston	Umatilla River Project—201-ft. bridge, and 0.95 miles grading and surfacing.
Union	Weston-Elgin	Forest Boundary-Elgin Section—3.26 miles grading, surfacing and oiling.
Morrow	Lexington-Echo	Sand Hollow-County Line Section—10.0 miles grading, surfacing and oiling.
Gilliam	Wasco-Heppner	Rock Creek-County Line Section—3.9 miles grading and surfacing.
Malheur	Jordan Valley	Hooker Creek-Jordan Valley Section—5.5 miles grading and surfacing.
Primary Highway:		
Lake	Klamath Falls-Lakeview	Cottonwood Creek-Lakeview Section—5.64 miles grading, surfacing and oiling.
General Projects:		
Clackamas	Milwaukie Building	Division office quarters and ground improvement.
Klamath	Klamath Falls Building	District maintenance office and storage shed.

WPA PROJECTS

During the past two years, federal funds have been available under the authority of laws enacted by Congress, for public work of various kinds affording employment to persons on public relief rolls. Prior to July 1, 1935, these funds were expended under the direction of the Federal and State Emergency Relief Administration. Subsequent to July 1, 1935, the use of the moneys has been directed by the Works Progress Administration.

A part of the moneys available for expenditure under the direction of the Works Progress Administration was ear-marked for use on projects to be supervised by the U. S. Bureau of Public Roads and the highway departments of the various states. Of this part, $5,372,846 was allocated to the state of Oregon. Further details concerning this allocation and its use are given hereinbefore under the heading "federal aid and federal work relief".

All WPA work in Oregon other than that referred to in the preceding paragraph, has been on a day labor basis under the direct supervision of the Works Progress Administration. It was required that each project be sponsored by some local governmental body such as a county or a municipality, but the amounts of financial cooperation required were little more than nominal.

The primary purpose of the WPA work has been to provide relief employment to as many persons as possible and, to accomplish this result, it was necessary to limit the amount which the relief employe might earn in any one month, and this restriction in turn required that the number of hours of work per day be short and the number of days per month be limited. This necessitated a rapid turn-over each month in the persons employed on a project, or required that the project be suspended for a period of time each month.

Under the conditions imposed, the classes of work which could be most effectively performed on highways are roadside clean-up, landscaping, slope protection and the construction of buildings of various kinds. However, under favorable conditions, clearing and grading work can be done to advantage, and several projects involving those kinds of work have been undertaken on the Wilson River Highway, the Wolf Creek Highway and elsewhere.

The Wilson River and Wolf Creek Highways WPA projects were first sponsored by the city of Portland, Multnomah County, Washington County, and Tillamook County, to provide work for the unemployed in those counties and particularly the city of Portland. The total amount allocated to the present time by the WPA for the grading of those two roads is approximately $4,000,000.

The State Highway Department provided the engineering for the earlier projects and is now furnishing powder, culvert pipe and some of the equipment.

A blanket appropriation of $1,050,000 was made available by the WPA for landscaping and other roadside work in Multnomah county. A project under this appropriation was undertaken on the Canyon Road section of the Tualatin Valley Highway, under the supervision of the State Highway Department landscape engineer. Other projects are under consideration.

At the request of the Champoeg Memorial Park Commission, a WPA project for the landscaping of the park grounds is now under way under the supervision of the landscape engineer.

Expenditures of cooperative state highway funds on WPA projects during the biennium were as follows:

Maintenance building and grounds at Eugene	$7,112.73
Maintenance building and grounds at Enterprise	4,064.22
Maintenance building and grounds at McMinnville	3,438.76
Landscaping, Silver Creek Falls Park	7,911.81
Improvements to Lava Caves Park	1,767.17
Riprapping fill at Pony Slough Bridge and fill at Coos Bay	1,000.00
Powder and culvert pipe, North Santiam Secondary Highway at Mill City	668.94
Powder for Powell Butte Section of Powell Butte Secondary Highway in Crook and Deschutes counties	745.84
Powder, equipment rentals and engineering on Wilson River Highway, Jordan Creek-Washington County Line Section, Tillamook county	656.34
Powder, equipment rental and engineering on Wilson River Highway, Glenwood-Tillamook County Line Section, in Washington county	4,257.40
Powder, equipment rentals and engineering on Multnomah County Line-Barnes Road Section, Wolf Creek Highway in Washington county	5,949.97
Powder, equipment rental and engineering on Sunset Camp-Tillamook County Line Section of Wolf Creek Highway in Washington county	2,320.56
Engineering and supplies for Richardson-Walton Section of Eugene-Swisshome Secondary Highway in Lane county	7,468.80

In addition to the projects described above, several surveys and investigations were undertaken for proposed projects, expenditures for these not to exceed $1,000.

FOREST HIGHWAYS

The federal appropriations for forest highways in Oregon, applicable to the fiscal years 1935 and 1936, were $954,052 and $939,956, respectively. Construction work accomplished during those two years consisted of 11 miles of grading, 16 miles of regrading and widening, 22 miles of rock surfacing, and 31 miles of oiling.

The forest highway funds allotted to Oregon since 1916 total $17,912,558.89. Of this amount, $12,144,579.83 have been expended on state highways, to which have been added $5,392,489.76 of state funds and $2,177,222.81 of county funds, bringing the amount expended for forest highway work on state highways to $19,714,292.40. This total expenditure has resulted in the completion of 662 miles of grading, 64 miles of regrading and widening, 692 miles of rock surfacing, 21 miles of resurfacing, and 159 miles of oiling and bituminous macadam.

The annual forest highway program is agreed upon by a joint conference of representatives of the Bureau of Public Roads and the Forest Service with the State Highway Commission, and is submitted to the Secretary of Agriculture for approval. All forest highway engineering and construction is handled by the Bureau of Public Roads. Also, all contracts are made by the government. County and state cooperative funds are paid to the government as required during the progress of the work. The use of state or county money, for forest highway construction, is not mandatory.

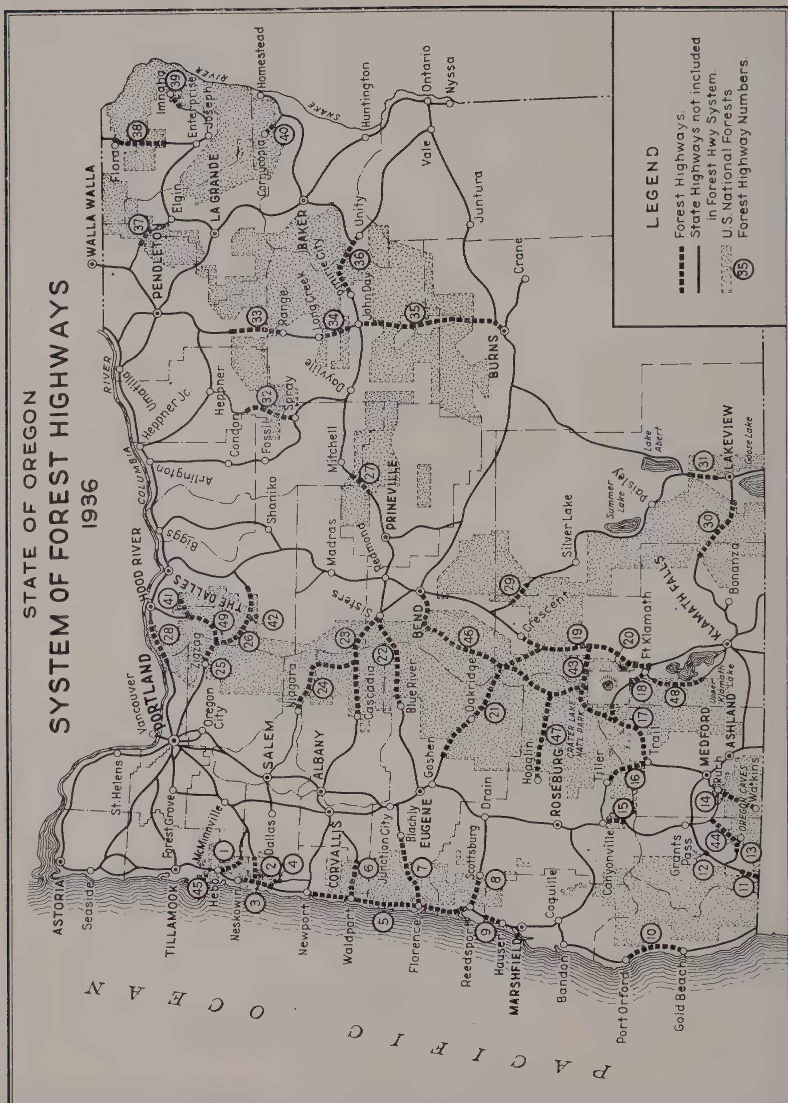
Forest highway funds are expended on county roads as well as state highways. Example of this may be found on the North Santiam Highway in Marion and Linn counties, which highway has received allotments of forest funds in excess of $700,000 during the last four years.

It is customary for the government to maintain sections constructed as forest roads for two years after the completion of the contracts, after which the state, in the case of state highways, and the county, in the case of county highways, must assume the obligation of maintenance.

The more important forest highway projects of the biennium on the state highway system are:

Highway	Section	Kind of Work
Columbia River	Tooth Rock Tunnel	Grading and paving
Santiam	Echo Mountain-Fish Lake	Grading
Santiam	Tombstone-Fish Lake	Grading and surfacing
Willamette	S. P. Crossing-East	Grading
Willamette	Salt Creek Canyon	Grading
Siuslaw	Florence-Rainrock	Oiling
Salmon River	Otis-Polk County Line	Surfacing
Weston-Elgin	Tollgate-Johnson Springs	Grading
Diamond Lake	Diamond Lake-West	Surfacing and oiling

More detailed descriptions of many of the forest highway projects are given hereinbefore under the heading "progress in highway construction".


STATE OF OREGON
SYSTEM OF FOREST HIGHWAYS
1936
LEGEND
Forest Highways.
State Highways not included in Forest Hwy System.
U.S. National Forests
35 Forest Highway Numbers.
PACIFIC OCEAN
COLUMBIA RIVER
SNAKE RIVER
PORTLAND
SALEM
EUGENE
ROSEBURG
MEDFORD
PENDLETON
BAKER
BEND
BURNS
LAKEVIEW
KLAMATH FALLS
THE DALLES
HOOD RIVER
ASTORIA
TILLAMOOK
CORVALLIS
ALBANY
MARSHFIELD
LA GRANDE
PRINEVILLE
ASHLAND
WALLA WALLA
CRATER LAKE NAT'L PARK

OREGON FOREST HIGHWAY SYSTEM

Route No.	State Hwy.	Name	Termini	Mileage
1	32	McMinnville-Tillamook	Hebo-East Forest Boundary	13.9
2	39	Salmon River	Oregon Coast Highway-West Polk County Line	13.7
3	9	Oregon Coast	Neskowin-Siletz River	23.0
4	181	Siletz River	Oregon Coast Highway-Forest Boundary	6.0
5	9	Oregon Coast	Yaquina Bay-Umpqua River	68.7
6	27	Alsea	Waldport-Benton County Line	28.4
7	34	Siuslaw	Oregon Coast Highway-Blachly	45.1
8	45	Umpqua	Reedsport-Scottsburg	16.4
9	9	Oregon Coast	Douglas County Line-Hauser	9.8
10	9	Oregon Coast	Port Orford-Gold Beach	31.3
11	25	Redwood	O'Brien Schoolhouse-State Line	5.4
12	25	Redwood	Summit Hayes Hill-Love Station	2.0
13	38	Oregon Caves	3 miles West of Forest Boundary to Caves	11.5
14	.....	Applegate	Ruch-Watkins	17.0
15	1	Pacific	Canyonville-2¾ miles South of Forest Boundary	11.0
16	230	Tiller to Trail	Tiller to Trail	26.2
17	22	Crater Lake	Trail-Park Boundary	44.0
18	22	Crater Lake	Dalles-California Highway-Park Boundary	7.7
19	4	Dalles-California	Crescent-Old Fort Klamath	57.8
20	424	Sand Creek	Dalles-California Highway-Park Boundary	4.3
21	18	Willamette	Lowell to Dalles-California Highway	72.0
22	15	McKenzie	Blue River to Sisters	51.3
23	16	Santiam	1 mile East of Foster to Sisters	69.9
24	.....	North Santiam	Niagara-Santiam Highway	43.2
25	26	Mount Hood	West Forest Boundary to Wapinitia Junction	15.4
26	44	Wapinitia	Mt. Hood Highway to 1 mile North of Wapinitia	32.9
27	41	Ochoco	4 miles West of West Forest Boundary to North Forest Boundary	19.3
28	2	Columbia River	West Forest Boundary to East Forest Boundary	27.9
29	19	Fremont	West to East Forest Boundary	16.2
30	20	Klamath Falls-Lakeview	West to East Forest Boundary	29.8
31	19	Fremont	4 miles South of Valley Falls to 6 miles North of Lakeview	13.0
32	321	Heppner-Spray	Mouth of Chapin Creek to John Day Highway	26.3
33	28	Pendleton-John Day	2½ miles Northwest of Albee to Range	30.7
34	28	Pendleton-John Day	Long Creek-South Forest Boundary	20.5
35	48	John Day-Burns	John Day-Burns	*69.5
36	5	John Day	Prairie City-Unity	42.6
37	330	Weston-Elgin	McDougall's Camp to Summerville-Elgin Road	23.2
38	11	Flora-Enterprise	2 miles East of Flora to South Forest Boundary	22.6
39	350	Little Sheep Creek	West Forest Boundary to Imnaha	8.8
40	.....	Baker-Cornucopia	Carson to Cornucopia	5.0
41	.....	Loop-Dalles	Mt. Hood Highway to East Forest Boundary	15.0
42	.....	Warm Springs	Wapinitia Highway Junction-Forest Boundary	7.0
43	.....	Diamond Lake	Union Creek to Dalles-California Highway via Diamond Lake	38.9
44	.....	Williams Creek	Applegate Highway to Oregon Caves Highway	20.0
45	9	Oregon Coast	North Forest Boundary to South Forest Boundary between Hebo and Beaver	1.0
46	.....	Cascade Lakes	North Boundary of Crater Lake Park to Bend	101.0
47	.....	North Umpqua	Rock Creek to Cascade Lakes Highway	60.0
48	421	Klamath Lake-West Side	Forest Boundary East of Gardner Peak to Forest Boundary South of Odessa Ranger Station	20.0
49	26	Mount Hood	Wapinitia Junction-North Forest Boundary	21.5

* Includes 2.5 miles on the Central Oregon Highway.

FEDERAL AID FUNDS AND FOREST ROAD FUNDS APPORTIONED TO OREGON JUNE 30, 1936

The following table shows the total federal aid funds and forest road funds apportioned to Oregon under the various federal aid acts:

Period for Which Funds Are Apportioned	Federal Aid Funds	Forest Road Funds	Total
July 11, 1916, to June 30, 1929*	$13,251,256.00	$ 6,899,817.89	$20,151,073.89
Act of May 26, 1928:			
July 1, 1929, to June 30, 1930	1,191,989.00	632,638.00	1,824,627.00
July 1, 1930, to June 30, 1931	1,197,667.00	631,987.00	1,829,654.00
Act of April 4, 1930:			
July 1, 1930, to June 30, 1931	798,445.00	702,208.00	1,500,653.00
July 1, 1931, to June 30, 1932	1,997,569.00	1,344,741.00	3,342.310.00
July 1, 1932, to June 30, 1933	2,027,318.00	1,414,811.00	3,442,129.00
Deduction from 1933 allotment of first repayment of emergency advance funds	—259,842.20		—259,842.20
Reapportionment of funds:			
July 1, 1930, to June 30, 1931	5,357.00		5,357.00
Act of December 20, 1930:			
December 20, 1930, to June 30, 1931			
Emergency advance funds	1,320,287.00	465,090.00	1,785,377.00
Emergency advance funds not used	—21,076.00		—21,076.00
Federal lands funds	193,377.00		193,377.00
Act of July 21, 1932:			
July 21, 1932, to June 30, 1933			
Emergency construction highway funds	2,001,740.00	773,121.00	2,774,861.00
Federal lands funds	130,705.00		130,705.00
Act of June 16, 1933:			
July 1, 1933, to June 30, 1934			
National recovery highway funds	6,106,896.00	2,186,449.00	8,293,345.00
National recovery federal lands funds	335,141.00		335,141.00
Act of June 18, 1934:			
July 1, 1934, to June 30, 1935			
National recovery highway funds	3,097,814.00	967,688.00	4,065,502.00
National recovery federal lands funds	170,861.00		170,861.00
July 1, 1935, to June 30, 1936			
Federal lands funds	174,331.00		174,331.00
Federal aid funds	2,044,633.00	954,052.00	2,998,685.00
July 1, 1936, to June 30, 1937			
Federal aid funds	2,045,078.00	939,956.00	2,985,034.00
Act of April 8, 1935:			
July 1, 1935, to June 30, 1936			
Works program highway funds	3,038,642.00		3,038,642.00
Works program grade crossing funds	2,334,204.00		2,334,204.00
Totals	$43,182,391.80	$17,912,558.89	$61,094,950.69

* For the detail of yearly allotments prior to 1929, see former reports of the State Highway Commission.

SECONDARY STATE HIGHWAYS

The State Highway Commission and the county courts of the state were authorized by an act of the Legislature enacted during the legislative session of 1931 to establish a system of secondary state highways.

The law provides that the secondary highways shall be selected from market roads, county roads or available routes or locations, and, in general, shall be intercounty in character and correlated with the state highway system.

The State Highway Commission and the county court of the county in which the secondary highway is located shall, by adopting proper resolutions, declare the road to be a secondary highway. Secondary highways may also be removed from the system in the same manner.

The act became effective on January 1, 1932, and on that date a system of approximately 2,000 miles was established.

The law provided that the system was to be financed by state highway revenues, and the funds therefor were to equal the amount which would be raised by a one-mill property tax levy, the amount being slightly more than $1,000,000 per year. The funds were to be allocated to each county on the basis of each county's assessed valuation and each county's tax ratio, provided that not more than 10 per cent of the total could be expended in any one county in any year.

The law was amended during the 1933 legislative session, and provided that the Highway Commission should expend not less than $450,000 each year on the system, and this sum was to be allocated for use in each county on the same basis as was provided in the original act.

The 1931 act provided that any county could, within the limits of the funds allocated to each county, perform maintenance and construction work on the system within the county, and be paid by the state for the work performed. This part of the act was repealed in 1933, and the State Highway Commission became responsible for all maintenance and construction.

The original act provided that the counties should acquire the right of way for secondary highways. This part of the act was amended at the 1935 session, and the State Highway Commission now acquires the right of way when needed.

The sum of $450,000 per year was found to be inadequate for maintenance, betterment and mandatory construction, and this sum has been exceeded each year.

As state funds became available by reason of increases in revenues for highway purposes, a program of construction has been carried on. In addition to the state funds being expended on the secondary highway system, considerable sums of federal funds allocated under the various relief acts have been expended.

Since the law became effective January 1, 1932, there has been expended on the secondary highway system, for maintenance and minor betterment, $1,826,119.52; for construction, state funds $1,685,280.50, federal funds $2,163,679.39, and county funds $32,070.98.

There is now a total of 2,130.56 miles of secondary highways in the system.

Tabular data showing detailed information of expenditures, classification of the system as to types of improvement, and the mileages in each county, are given elsewhere in this report.

MARKET ROADS

During the 1919 session of the State Legislature an act was passed and approved by a referendum vote of the people creating a system of farm to market roads. This act provided that the system which was established should be improved and maintained by a one-mill state tax levy and by county millage levies and such other funds as might be provided. The state millage levy was repealed by action of the 1931 legislative session, the repeal becoming effective January 1, 1932.

On December 31, 1931, there were 6,273.71 miles of market roads in the system on which there had been expended the sum of $33,279,172.23 for maintenance and construction.

The act repealing the state one-mill market road levy did not abolish the market road system in the state, but placed the responsibility for, and the supervision of, the system under the control of the county courts.

The mileage of market roads was considerably reduced by reason of the inclusion of approximately 2,000 miles in a system of state secondary highways, and at the close of the present biennium there are approximately 4,250 miles of roads remaining in the market road system.

The amended market road law does not prevent the counties from levying a market road tax, and most of the counties in the state are continuing the policy of levying a market road millage tax.

During the past biennium from July 1, 1934, to June 30, 1936, the counties report that they have expended $867,064.15 for the maintenance and construction of market roads.

COAST HIGHWAY BRIDGES

During this biennium the five Coast Highway Bridges at Yaquina Bay, Alsea Bay, Siuslaw River, Umpqua River, and Coos Bay were completed and opened to travel. A description of each of the bridge structures included in this project follows:

Yaquina Bay Bridge:

This structure is the northermost of the five bridges included in the project. The bridge is 3,260 feet long with a 27 foot clear roadway with a 3′ 6″ sidewalk on each side of the roadway. The highway approaches connect at the north end of the bridge at an elevation 116 feet above sea level. The grade line rises to 140 feet above the center of the channel and then descends at a maximum grade of 5 per cent to a connection with the highway on the low lying ground at the south side of the Yaquina Bay. The span across the navigable channel is a 600 foot steel arch supported by concrete piers. The roadway passes between two arch rings and is suspended from the arch rings by hangers. This main arch attains a height of 246 feet above mean sea level and provides a navigable channel 400 feet wide and 135 feet in height. At each end of the main

span a 350 foot steel arch connects to the concrete viaduct approaches on the north and to a series of reinforced concrete arches spanning the tide flats to the south. These concrete arches vary in length from 265 feet, joining the steel arches, to 160 feet at the south end of the series. All of the concrete arches are supported by piers resting on timber piling driven to a depth of approximately 70 feet below the water level.

The construction of long span concrete arches on pile foundations is made practicable by the use of the Considere Hinge. This hinge is a short block of concrete heavily reinforced and of a relatively small cross-section. Under the high stress placed upon it, it becomes flexible and allows the arch to adjust itself, to compensate for the effects of shrinkage and dead load deformation, both of the concrete and the piling. Before subjecting the arches to the load of traffic, the hinges are encased in concrete and rigidly fixed.

The state has acquired title to the land at each end of the bridge for use as state parks, and the surroundings have been appropriately landscaped.

The construction of this bridge necessitated the moving of approximately 25,000 cubic yards of excavation, the driving of approximately 123,000 lineal feet of piling, and the placing of approximately 30,000 cubic yards of concrete, 1,123 tons of reinforcing metal and 2,065 tons of structural steel. The construction of the bridge provided approximately 499,965 man-hours of labor at the site in addition to the great amount of labor expended in producing the materials used.

The contract for the bridge was awarded on July 25, 1934, to the Gilpin Construction Company and the General Construction Company as a joint venture. The structure was opened to travel on September 6, 1936, and all work was completed on November 28, 1936. The total estimated cost of the structure, including right of way, location surveys, field engineering and contract items is $1,301,016.25.

Alsea Bay Bridge:

The bridge across the Alsea Bay at Waldport is the third in size and cost of the Oregon Coast Bridges. It spans the bay within a half mile of its mouth. The total length of the structure is 3,028 feet, and is entirely a reinforced concrete structure. It has a roadway 24 feet in width and a 3′ 6″ sidewalk on each side of the roadway. From the north an approach viaduct 70 feet long leads to three 150-foot concrete arches entirely below the roadway. Joining these, three concrete arches, with the roadway between the arch ribs, span the navigable channel. This is followed by three 150-foot concrete arches below the roadway and 1,418 feet of viaduct across the shallow portion of the bay. The three arch series spanning the navigable channel is notable in the use of a concrete encased structural steel tie acting as a bottom chord of the arches. This eliminates any inclined reactions on the piers and permits the use of a slender and economical pier.

The contract for this structure was awarded on April 26, 1934, to the firms of Lindstrom & Feigenson, Parker & Banfield, and T. H. Banfield, as a joint venture. The structure was opened to travel on May 9, 1936, and all work was completed on June 15, 1936. The total cost of the structure, including right of way, location surveys, field engineering and contract items was $778,260.73.

BRIDGE OVER SIUSLAW RIVER ON THE OREGON COAST HIGHWAY AT FLORENCE

BRIDGE OVER UMPQUA RIVER ON THE OREGON COAST HIGHWAY AT REEDSPORT

The construction of this bridge entailed the moving of approximately 7,000 cubic yards of excavation, the driving of approximately 82,000 lineal feet of piling and the placing of approximately 20,000 cubic yards of concrete and 1,000 tons of reinforcing steel. The construction of the bridge provided 394,031 man-hours of labor at the site in addition to the labor in preparing the materials.

The north end of this structure is in a state park and has been appropriately landscaped.

Siuslaw River Bridge:

The Siuslaw River Bridge connects the towns of Florence and Glenada. This structure is the smallest and the least expensive of the five Coast Bridges. The total length of the structure is 1,650 lineal feet. It has a 27-foot roadway and a 3′ 6″ sidewalk on each side of the roadway. The structure consists of a reinforced concrete viaduct across the shallower portions of the river and connecting with the highway grade on either bank, and two 154-foot concrete arches, one at each end of a double leaf bascule drawbridge. This drawbridge provides a clear opening of 140 feet to care for navigation using this stream. The drawbridge is electrically operated and the circuits are so interlocked that the operation can be done only in one prescribed sequence. This assures the safe operation of the drawbridge and guards against any damage being done to the structure or hazard created for highway travel.

The construction of this bridge necessitated the moving of approximately 3,800 cubic yards of excavation, the driving of approximately 40,800 lineal feet of piling and the placing of approximately 10,000 cubic yards of concrete, 200 tons of structural steel and 1,000 tons of reinforcing steel, together with the necessary mechanical and electrical equipment to operate the drawbridge, The construction of the bridge provided 203,570 man-hours of labor directly on the project in addition to a large amount of labor in preparing the necessary materials.

The contract was awarded on July 25, 1934, to the Mercer-Fraser Company of Eureka, California. The structure was opened to travel on March 31, 1936, and all work was completed on April 10, 1936. The cost of the structure, including right of way, location surveys, field engineering and contract items was $527,068.67.

Both ends of the bridge have been appropriately landscaped and parking areas provided.

Umpqua River Bridge:

The crossing of the Umpqua River between Gardiner and Reedsport entails the crossing of the main channel, the crossing of the north or Smith River Channel, and a heavy cut through the backbone of Bolon Island which divides these two channels. Only the crossing of the main channel is included in the Coast Bridge project, the north channel and the Bolon Island cut being done as federal aid projects.

The main channel crossing has a total length of 2,213 feet. It consists of four 154-foot reinforced concrete arches, a 430-foot structural steel swing draw span and 1,156 lineal feet of concrete viaduct. The roadway is 27 feet in width and has a 3′ 6″ sidewalk on either side. The draw span when opened, provides two openings one on either side of a central pier. Each of these openings provides a clear space of 195 feet.

The swing span is electrically operated through duplicate controllers, one mounted in the operating house above the roadway, and another alongside the sidewalk and roadway level. The operations are similarly interlocked to those for the Siuslaw River Bridge. In addition to the ordinary precautions of roadway gates and warning signs, a section of the deck of the approach on each side of the draw span has been hinged so that it can be raised to form a barrier, preventing travel from running through the opened draw.

The construction of this bridge necessitated the moving of approximately 3,500 cubic yards of excavation, the driving of approximately 41,000 lineal feet of piling, and the placing of approximately 10,000 cubic yards of concrete, 740 tons of structural steel and 650 tons of reinforcing steel, together with the necessary mechanical and electrical equipment to operate the swing span. The building of the bridge provided 215,227 man-hours of labor directly on the project in addition to the indirect labor represented by the materials used.

The contract was awarded on July 25, 1934. The contractor for the adjacent highway sections was permitted to haul material across the bridge on February 15, 1936, and all work was completed on April 7, 1936. The cost of the structure, including right of way, location surveys, field engineering and contract items was $581,467.82.

Coos Bay Bridge:

The farthest south, the longest and most costly of the five Coast Bridges is the one across Coos Bay near North Bend. This structure has a total length of 5,337 feet and has a 27-foot roadway with a 3′ 6″ sidewalk on each side.

The bridge consists of viaduct approaches out to the shore line of the bay, joining onto a series of reinforced concrete arches across the shallower portions of the bay on each side of the main channel. The concrete arches on the north side of the bay are seven in number, varying from 151 feet in length to 265 feet in length. The concrete arches on the south side of the bay are six in number, varying from 170 feet in length to 265 feet in length. Their construction is similar to that of the concrete arches in the Yaquina Bay Bridge previously described. The navigable channel and the deeper parts of the bay are spanned by a steel cantilever having a total length of 1,708 feet. This cantilever has a main span of 793 feet with an anchor span on each side 467 feet 6 inches in length. The main channel opening provides a clear distance of 515 feet between pier fenders, with a minimum clearance of 120 feet. Over a distance of 323 feet in the center of this opening, the clearance is a minimum of 135 feet.

The design of the structural steel for this bridge, as well as for all other bridges of the project avoided as much as possible the use of open or laced sections on account of the difficulty of painting such sections and their consequent deterioration from rust. All built-up members are of boxed section, presenting only wide, smooth surfaces easy to keep painted.

The construction of this bridge necessitated the moving of approximately 24,000 cubic yards of excavation, the driving of approximately 217,000 lineal feet of piling, the placing of approximately 51,000 cubic yards of concrete, 3,635 tons of structural steel and 2,205 tons of reinforcing steel. The work on the bridge provided 789,040 man-hours of di-

rect labor on the site in addition to the indirect labor represented by the materials used.

The contract for this structure was awarded in two parts. The piers and concrete approaches were let to the Northwest Roads Company of Portland, and the structural steel of the cantilever span, together with the concrete deck on this span, were let to the Virginia Bridge and Iron Company of Roanoke, Virginia. The contracts were awarded on July 25, 1934. The bridge was opened to traffic on May 9, 1936, and all work was completed on September 11, 1936. The total cost of the structure, including right of way, location surveys, field engineering and contract items was $2,143,391.39.

The cost of designing the structures, the cost of examination of the special revenue bonds, the cost of short term financing, and miscellaneous undistributed charges total $104,662.62. The total cost of the project is estimated to be as follows:

Yaquina Bay Bridge	$ 1,301,016.25
Alsea Bay Bridge	778,260.73
Siuslaw River Bridge	527,068.67
Umpqua River Bridge	581,467.82
Coos Bay Bridge	2,143,391.39
Undistributed costs	104,662.62
	$ 5,435,867.48

This is $166,132.52 lower than the $5,602,000 originally estimated as the cost of the structures.

The purpose of this project was two-fold: First, to link up the previously completed sections of the Coast Highway and to do away with the inadequate and expensive ferries operated at these five locations. The second purpose was to provide labor for a great number of men thrown out of employment by the depression. How well the object of this second purpose has been accomplished, can be judged by the following figures:

These five structures provided, in the aggregate, 2,101,833 man-hours of labor directly on the projects. This figure does not take into account the additional employment provided by the assembling, manufacture and transportation of the materials used in the construction. Of materials produced exclusively within the state, the following tabulation is indicative of the quantities involved:

MAJOR MATERIALS PRODUCED WITHIN THE STATE

	Approximate Amounts
Piling (includes false work)	504,000 lin. ft.
Lumber (includes forms and false work)	16,000,000 board ft.
Sand	54,000 cu. yds.
Gravel	110,000 cu. yds.
Cement	182,000 bbls.

The original plan for financing the construction of the Coast Bridges contemplated the sale, to the United States Government, of $4,200,000 worth of special revenue bonds bearing 4 per cent interest, and a grant by the Government to the state of 30 per cent of the labor and material cost, this grant not to exceed $1,402,000, thereby providing a total revenue of $5,602,000, which was the original estimated cost of the structures. The special revenue bonds were to be retired from revenue derived by collecting tolls from traffic using the structure. A contract incorporating the above procedure was entered into between the Federal Govern-

ment and the State of Oregon on March 30, 1934, and $2,000,000 of the special revenue bonds were sold to the federal government.

The legislative assembly of 1935 authorized the Highway Commission to operate the bridges toll-free and substitute general revenue bonds in the amount of $4,200,000 to replace the special revenue bonds. The consent of the federal government was secured to this exchange of securities. Conditions on the bond market had improved to such an extent that the Highway Commission could foresee a substantial saving in interest rates over that charged by the government. Sale of these securities on the general market was approved by the government and accordingly the Highway Commission, on July 26, 1936, sold $3,000,000 worth of general revenue bonds varying in interest rate from 1¾ per cent to 2½ per cent, the average coupon rate being approximately 2.269 per cent. These bonds were sold on the open market at a net interest cost to the state of 2.6245 per cent, as against the 4 per cent cost on bonds sold to the government. Proceeds from this $3,000,000 bond sale were deposited with the State Treasurer in the general highway fund.

The government required that all funds used in financing the Coast Bridges be deposited in a Federal Reserve Bank. The State Treasurer was prohibited from making such direct transfers from the State Highway fund, or from permitting the depositing of funds derived from general obligation bonds in the Federal Reserve Bank, and ear-marked for disbursement, by anyone except the Treasurer himself, under the laws of the State of Oregon. It was necessary for the Highway Commission to complete the sale of the remaining $2,200,000 of special revenue bonds on a short term basis, deposit the proceeds from their sale to the Federal Reserve Bank, and then retire the special revenue bonds with monies supplied by the State Highway fund. The $2,200,000 worth of bonds were sold in small blocks of $300,000 and $400,000, as the funds were needed to meet construction obligations, and each block was bought up at the end of a ten-day period. The plan of financing, as above described, appeared to be the only legal method available to satisfy both the contract with the Federal Government and the laws of the State of Oregon.

A revised contract is being prepared wherein the financial set-up is revised to a straight grant basis and increases the maximum of grant to $1,600,000.

The result has been that only $3,000,000 par value of bonds are now outstanding against the project. The remainder of the cost is paid from federal grant funds and from current highway revenue.

The designs and plans for the Coast Highway Bridges were prepared under the supervision of C. B. McCullough, Assistant State Highway Engineer and Bridge Engineer. The construction of the bridges was directed by Mr. McCullough until October of 1935, when he was granted a leave of absence for one year and three months, to accept an appointment with the U. S. Bureau of Public Roads in connection with bridge design and bridge construction in Central America. Subsequent to October, 1935, the construction of the Coast Bridges has been under the supervision of Glen S. Paxson, Acting Bridge Engineer.

A detailed statement of bond sales and retirements is shown in the following Schedules "A" and "B".

SCHEDULE "A"

SCHEDULE OF BOND SALES

Date of Sale	Bond Sold	Sold To	Receipts From Sale		Remarks
			Principal	Accrued Interest	
7-25-34	Special Revenue, M1-M1000, Inc.	U. S. Government	$1,000,000.00	$ 16,000.00	For construction
1-22-35	Special Revenue, M1001-M2000, Inc.	U. S. Government	1,000,000.00	15,666.67	For construction
7-26-35	General Highway Revenue, 11581-14580, Inc. (Par value $3,000,000)	First Naticnal Bank of Portland, Broker	2,893,283.86		Deposited in highway general fund
7-29-35	Special Revenue, M2001-M2300, Inc.	Ladd & Bush	300,000.00	4,866.50	For construction
9- 5-35	Special Revenue, M2301-M2700, Inc.	Ladd & Bush	400,000.00	*	For construction
10-10-35	Special Revenue, M2701-M3100, Inc.	Ladd & Bush	400,000.00	*	For construction
12-10-35	Special Revenue, M3101-M3500, Inc.	Ladd & Bush	400,000.00	*	For construction
1- 9-36	Special Revenue, M3501-M3900, Inc.	Ladd & Bush	400,000.00	*	For construction
4-10-36	Special Revenue, M3901-M4200, Inc.	Ladd & Bush	300,000.00	*	For construction

SUMMARY

Par value bonds sold	$7,200,000.00
Received on principal	7,093,283.86
Accrued interest received	36,533.17

* These bonds sold to Ladd & Bush under agreement to repurchase in 10 days. Accrued interest waived at time of sale and interest paid at time of repurchase computed on 10 day basis.

SCHEDULE "B"

SCHEDULE OF BOND RETIREMENT AND INTEREST PAYMENTS

Date	Paid To	Item	Bond Principal	Interest	Remarks
8-25-34	Federal Reserve Bank, Fiscal Agent	Interest on special revenue bonds, M1-M1000	$	$20,000.00	From bridge sinking fund
2-26-35	Federal Reserve Bank, Fiscal Agent	Interest on special revenue bonds, M1-M2000		40,000.00	From bridge sinking fund
8-19-35	Federal Reserve Bank, Fiscal Agent	Retire special revenue bonds, M1-M2000, inclusive	2,000,000		From highway general fund
8-19-35	Federal Reserve Bank, Fiscal Agent	Interest on special revenue bonds, M1-M2000		37,333.33	From highway general fund
8- 5-35	Ladd & Bush	Retire special revenue bonds, M2000-M2300, inclusive	300,000		From highway general fund
8- 5-35	Ladd & Bush	Interest on special revenue bonds, M2000-M2300		5,199.83	From highway general fund
9-10-35	Ladd & Bush	Retire special revenue bonds, M2301-M2700, inclusive	400,000		From highway general fund
9-10-35	Ladd & Bush	Interest on special revenue bonds, M2301-M2700		444.44	From bridge sinking fund
10-21-35	Ladd & Bush	Retire special revenue bonds, M2701-M3100, inclusive	400,000		From highway general fund
10-21-35	Ladd & Bush	Interest on bonds, M2701-M3100, inclusive		444.44	From bridge sinking fund
12-20-35	Ladd & Bush	Retire bonds, M3101-M3500, inclusive	400,000		From highway general fund
12-20-35	Ladd & Bush	Interest on bonds, M3101-M3500, inclusive		444.44	From bridge sinking fund
1-17-36	Ladd & Bush	Retire bonds, M3501-M3900, inclusive	400,000		From highway general fund
1-20-36	Ladd & Bush	Interest on bonds, M3501-M3900, inclusive		444.44	From bridge sinking fund
4-17-36	Ladd & Bush	Retire bonds, M3901-M4200, inclusive	300,000		From highway general fund
4-17-36	Ladd & Bush	Interest on bonds, M3901-M4200, inclusive		333.33	From bridge sinking fund

Total bonds retired	$4,200,000.00
Total interest payment	104,644.25
Total interest cost	68,111.08

The total estimated cost of the structures as set forth on page 59 is $5,435,867.48. To arrive at the amount of current highway revenue used in the construction of the bridges, a study of Schedules A and B above discloses the following:

Principal received on bond sales		$ 7,093,283.86
Principal retired		4,200,000.00
Actual revenue from bond sales		$ 2,893,283.86
Total construction cost, including interest cost of temporary financing		$ 5,435,867.48
Bond revenue	$ 2,893,283.86	
Grant earnings (estimated)	1,586,902.00	
		4,480,185.86
Required from current highway income		$ 955,681.62

The estimated savings in interest payments due to the revised method of financing over the original plan is indicated in the following:

Special Revenue Bond Plan—		
Interest on $4,200,000 issue throughout its life		$ 3,051,400.00
General Revenue Bond Plan—		
Discount on $3,000,000 bond issue less accrued interest		106,716.14
Interest on $3,000,000 issue throughout its life		1,065,797.00
Interest paid federal government on $2,000,000 special revenue bond sold, less accrued interest		65,666.66
Interest paid Ladd & Bush on temporary financing, less accrued interest		2,444.42
		$ 1,240,624.22
Net saving		$ 1,810,775.78

STATUS OF COAST BRIDGE ACCOUNT

December 1, 1936

Revenues:	
Sale of $2,000,000 special revenue bonds	$ 2,000,000.00
Accrued interest on above	*31,666.67
Sale of $2,200,000 special revenue bonds to Ladd & Bush	2,200,000.00
Accrued interest on above	*4,866.50
Grant payments from federal government	1,296,246.18
Interest earned on bank balances (estimated)	1,200.00
Payment from state highway fund, nonparticipating items	64,771.81
Estimated future grant payments	290,655.82
Total	$ 5,852,873.81
Total estimated cost of project	$ 5,435,867.48
Estimated sum to revert to state highway fund	$ 417,006.33

* Not included in total. These sums represent difference between "total interest payment" and "total interest cost" as shown in schedule "B".

GENERAL DATA—COAST HIGHWAY BRIDGES

	Yaquina Bay Bridge	Alsea Bay Bridge	Siuslaw River Bridge	Umpqua River Bridge	Coos Bay Bridge	General for All Five Bridges	Totals
Date bids received	5-17-34	4- 5-34	6- 7-34	6- 7-34	4-26-34		
Date contract awarded	7-25-34	4-26-34	7-25-34	7-25-34	7-25-34 7-25-34		
Contractor	Gilpin Const. Co. and Gen'l Const. Co., joint venture	Lindstrom & Feigensen & T. H. Banfield, joint venture	Mercer-Fraser Company	Teufel & Carlson	Northwest Roads Co. Virginia Bridge & Iron Co.		
Contract amount	$1,357,587.50	$ 685,040.00	$ 491,646.00	$ 551,234.00	$1,529,438.00 593,880.00		
Date construction started	8- 1-34	5- 1-34	8- 6-34	7-30-34	7-30-34 3-29-35		
Date construction completed	11-28-36	6-15-36	4-10-36	4- 7-36	9-11-36 7- 2-36		
Estimate of Final Cost:							
I Preliminary	$ 9,773.02	$ 6,305.13	$ 6,034.64	$ 10,800.13	$ 8,352.74	$	$ 41,265.66
II Right of way	50.00	1,750.00	5,005.75	2,275.00	4,590.00		13,670.75
III Construction	1,258,193.23	747,532.09	502,151.84	551,883.55	2,093,098.65		5,152,859.36
IV Engineering	33,000.00	22,673.51	13,876.44	16,509.14	37,350.00	33,826.22	157,235.31
V Legal						1,000.00	1,000.00
VI Interest during construction						68,111.08	68,111.08
VII Miscellaneous						1,725.32	1,725.32
Totals	$1,301,016.25	$ 778,260.73	$ 527,068.67	$ 581,467.82	$2,143,391.39	$ 104,662.62	$5,435,867.48

BETTERMENT WORK

New construction consists of the first or initial construction of a highway to state highway standards. Betterment consists of improvements of a material nature made on the highway subsequent to the initial conconstruction. Included in the last mentioned of these classes of improvement are the widening and straightening of roadbeds, the improvement of foundations and drainage, the widening and thickening of pavement, the non-skid treatment of pavement, the change from a lower to a higher type of surface, the erection of guard fence, the replacement of wood structures by structures of more permanent type, the planting of trees and shrubs along the highways, etc.

For department purposes, betterments are classified in two groups, major betterments and minor betterments. In the class of major betterments are included those projects of a major nature which are handled either by contract or by large state force gangs working independently of the regular section crews. Minor betterment includes such betterment as is performed by small state force crews such as are used on general maintenance work.

Expenditures for major betterment work amounted to $2,183,193.00 in the fiscal year 1935, and to $2,171,326.78 in the fiscal year 1936. Expenditures for minor betterment work during the same fiscal years amounted to $198,250.04 and $164,948.75, respectively. An itemization of the minor betterment expenditures during the calendar years 1934 and 1935, is given in the table which follows.

EXPENDITURES FOR MINOR BETTERMENTS

Calendar Years 1934 and 1935

Items	Calendar Year 1934	Calendar Year 1935
Concrete pavement	$ 8,285.98	$ 1,336.23
Bituminous pavement	6,783.73	8,303.49
Bituminous macadam	1,480.20	.....
Oiled macadam	13,053.72	10,667.49
Untreated rock or gravel surfacing	5,574.09	5,952.22
Roadbed and right of way	36,503.83	60,362.57
Oiled or bituminous macadam shoulders	44,447.39	354.18
Rock or gravel shoulders	8,141.69	10,371.31
Bridges	25,130.64	25,268.28
Guard fence	17,137.53	29,447.07
Snow fence	4,746.81	1,812.57
Road signs	155.49	124.75
Clearing right of way	.....	30.31
Roadside planting	1,243.13	32.06
Gravel pits and quarries	.....	850.23
Supervision	6,664.90	6,468.89
Totals	$179,349.13	$161,381.65

TYPICAL OF LOG-HAULING TRAFFIC

KEEPING THE ROADWAY OPEN ON THE MT. HOOD HIGHWAY, CLACKAMAS COUNTY

MAINTENANCE WORK

The maintenance of the highways is that work which is necessary to preserve the highways and their appurtenances in good condition and to prevent the loss of capital investment. As a matter of convenience for departmental purposes, maintenance is separated into two classes: (1) special maintenance and (2) general maintenance. The term "special maintenance" is applied to those features involving major maintenance operations which are carried on either by contract or large state force crews. The resurfacing of macadams and the crushing and stock-piling of maintenance materials are examples of this class of work. This work is in the nature of replacement work and by some states is termed reconstruction, therefore not appearing in their reports as a maintenance charge. However, since it replaces the loss of capital investment, it is properly a charge against maintenance. This, however, does not include the larger jobs involving the construction of deep foundations of crushed rock or crushed gravel to reinforce the sections which have proven inadequate to carry traffic and which involve the placing of considerably larger amounts of crushed materials than were originally placed, which work is properly carried as "betterment".

The term "general maintenance" covers the class of operation which is carried on solely by state forces and which, for the major part, is the activity of permanent section gangs. It includes, also, such maintenance work as is performed by the state paving plants and oiling crews which operate in specially organized extra gangs separate and apart from the regular section crews.

The cost of maintaining the primary and secondary state highways during the calendar years 1934 and 1935, and the mileages of each class of highway maintained, are shown in the following table:

Class of Highway	Year	Amounts Expended			Miles Maintained	Cost per Mile
		General Maintenance	Special Maintenance	Total		
Primary	1934	$1,761,025.00	$ 148,268.00	$1,909,293.00	4,284	$446.00
Primary	1935	1,849,887.00	155,456.00	2,005,343.00	4,428	453.00
Secondary	1934	499,218.00		499,218.00	1,940	257.00
Secondary	1935	505,270.00		505,270.00	1,975	256.00

Itemized statements of the maintenance expenditures on primary highways during each of the calendar years 1934 and 1935, including per mile costs for each item, are given in the accompanying tables designated Maintenance Table "A" and Maintenance Table "B".

All maintenance operations are carried on under the supervision of J. N. Bishop, Maintenance Engineer.

MAINTENANCE TABLE "A"

COSTS OF MAINTAINING PRIMARY STATE HIGHWAYS CALENDAR YEAR 1934

Item	General Maintenance Charges	Special Maintenance Charges	Total Maintenance Charges	Miles Maintained	Cost per Mile
1. Pavement:					
(a) Concrete	$ 11,530.63	$	$ 11,530.63	233	$ 48
(b) Bituminous	77,538.10	.....	77,538.10	534	145
(c) Winter sanding	4,552.90	.....	4,552.90	.....	.....
2. Shoulders:					
(a) Oiled or bituminous macadam	5,068.05	.....	5,068.05	.....	.....
(b) Rock or gravel	74,586.06	19,428.36	94,014.42	.....	.....
3. Bituminous macadam:					
(a) Maintenance of wearing surface	30,848.46	.....	30,848.46	827	37
(b) Resealing and plant patching	96,173.23	.....	96,173.23	827	116
(c) Stock-pile material	.....	45,063.19	45,063.19	.....	.....
4. Oiled macadam:					
(a) Maintenance of wearing surface	181,696.19	.....	181,696.19	1,428	127
(b) Re-oiling	238,876.04	.....	238,876.04	1,428	167
(c) Stock-pile material	.....	82,853.91	82,853.91	.....	.....
5. Rock or gravel surfacing:					
(a) Ordinary maintenance	165,102.60	.....	165,102.60	1,009	164
(b) Unusual maintenance	5,835.26	.....	5,835.26	1,009	58
(c) Resurfacing	.....	922.82	922.82	.....	.....
6. Roadbed and right of way:					
(a) General maintenance	355,945.22	.....	355,945.22	4,284	83
(b) Removal of slides	69,044.97	.....	69,044.97	.....	.....
(c) Cutting and burning weeds and brush	81,576.98	.....	81,576.98	4,284	19
(d) Guard fence	25,443.41	.....	25,443.41	.....	.....
7. Bridge maintenance	104,966.68	.....	104,966.68	.....	.....
8. Snow removal and snow fence	77,920.31	.....	77,920.31	4,284	18
9. Prospecting for maintenance materials	1,122.82	.....	1,122.82	.....	.....
10. Road signs and traffic stripes	86,095.96	.....	86,095.96	4,284	20
11. Tree maintenance	1,659.14	.....	1,659.14	.....	.....
12. General supervision	65,442.52	.....	65,442.52	4,284	15
Totals	$1,761,025.58	$ 148,268.28	$1,909,293.86	4,284	$ 446

UNIT COSTS OF RE-OILING, 1935

Specification	Miles Oiled	Cost per Mile 18-foot Roadway		Cost per Square Yard	
		Rock Cost Included	Rock Cost Excluded	Rock Cost Included	Rock Cost Excluded
0- 9	27.08	$1,678.85	$1,113.66	$ .159	$ .105
0-11	1.33	2,883.43	1,812.68	.275	.172
0-30	249.42	655.29	462.78	.062	.044
0-31	51.86	527.30	422.83	.050	.040
Average cost	329.69	$ 728.64	$ 515.50	$ .069	$ .049

MAINTENANCE TABLE "B"

COSTS OF MAINTAINING PRIMARY STATE HIGHWAYS CALENDAR YEAR 1935

Item	General Maintenance Charges	Special Maintenance Charges	Total Maintenance Charges	Miles Maintained	Cost per Mile
1. Pavement:					
(a) Concrete	$ 20,549.40	$	$ 20,549.40	246	$ 83
(b) Bituminous	112,373.83	.....	112,373.83	582	193
(c) Winter sanding	12,689.10	8,015.97	20,705.07	.....	.....
2. Shoulders:					
(a) Oiled or bituminous macadam	21,537.55	.....	21,537.55	.....	.....
(b) Rock or gravel	79,259.91	4,007.49	83,267.40	.....	.....
3. Bituminous macadam:					
(a) Maintenance of wearing surface	35,897.16	.....	35,897.16	854	42
(b) Resealing and plant patching	107,762.94	.....	107,762.94	854	126
(c) Stockpile material	.....	15,852.39	15,852.39	.....	.....
4. Oiled macadam:					
(a) Maintenance of wearing surface	212,380.68	.....	212,380.68	1,423	149
(b) Re-oiling of wearing surface	214,399.47	.....	214,399.47	1,423	150
(c) Stockpile material	.....	94,312.31	94,312.31	.....	.....
5. Rock or gravel surfaced:					
(a) Ordinary maintenance	140,593.88	.....	140,593.88	982	143
(b) Unusual maintenance	9,540.00	.....	9,540.00	982	10
(c) Resurfacing	.....	33,267.91	33,267.91	.....	.....
6. Roadbed and right of way:					
(a) General maintenance	325,956.63	.....	325,956.63	4,428	74
(b) Removal of slides	43,054.01	.....	43,054.01	.....	.....
(c) Cutting and burning weeds and brush	73,712.34	.....	73,712.34	.....	.....
(d) Guard fence	17,862.77	.....	17,862.77	.....	.....
7. Bridge maintenance	105,311.29	.....	105,311.29	.....	.....
8. Snow removal and snow fence	139,770.08	.....	139,770.08	4,428	32
9. Road signs and traffic stripes	98,888.60	.....	98,888.60	4,428	22
10. Tree maintenance	4,196.43	.....	4,196.43	.....	.....
11. General supervision	74,151.67	.....	74,151.67	4,428	17
Totals	$1,849,887.74	$ 155,456.07	$2,005,343.81	4,428	$ 453

ROADSIDE BEAUTIFICATION

The roadside beautification program commenced in 1934 was continued during 1935 and 1936 under the regulations of the Bureau of Public Roads, which require that not less than 1 per cent of all federal highway funds allotted to the state be expended on this class of work. The work has been extended in scope and is now an integral part of the road construction. The natural scenic assets are studied and the preservation of roadside beauty planned during the field location of the highways. The saving of top-soil, selective tree cutting, rounding of slopes, seeding and planting are thus a part of the general plan. Wherever possible, the landscape treatment is made to conform to the larger natural setting and to employ as nearly as possible those trees and shrubs which are native to

the immediate vicinity. The roadside improvement aims to heal the necessary scars of construction by the re-distribution of the top-soil and to restore to the roadside the natural beauty with which Oregon is so generously blessed.

In areas approaching towns or cities, definite roadside plantings along more formal lines are carried out, when such planting does not destroy more valuable scenic outlooks.

In addition to the 1 per cent allocation of federal highway funds, above referred to, roadside improvement work is being carried out under the auspices of the Works Progress Administration. The Canyon Road approach to the Wolf Creek Highway is one of the projects carried out under this program. Roadside improvement under the Works Progress Administration includes also the useful improvement work of roadside drainage, building of retaining walls, stone snow fences and rock guard screens as well as slope rounding and planting work.

In the semi-arid regions of Oregon, where long unbroken stretches of highway devoid of trees occur, definite areas are planted to groves of trees and provided with deep well irrigation. Two of these Oases have been completed on the Old Oregon Trail between Arlington and Umatilla.

Because of the completion of the coast bridges, the construction department has made extensive improvements at the various bridge approaches and planting plans have been completed for further beautifying the plazas and park areas provided at these bridge heads.

In addition to the immediate roadside problems, the construction department has prepared plans for the landscaping of various maintenance yards and division headquarters, the landscaping work to be done in conjunction with the Federal Public Works Administration. The federal grade separation program also involves roadside improvement, and extensive work of that kind is being carried out at the Oregon City grade separation and at the Union Avenue grade separation in Portland.

The Highway Department is striving to leave no stone unturned in this state-wide task of conserving roadside beauty for the enjoyment of both those who reside in the state and those who come as visitors.

The preparation of the plans and the direction of the work of roadside improvement are under the direction of George H. Otten, landscape architect.

STATE-WIDE HIGHWAY PLANNING SURVEY

Early in 1936 the Oregon State Highway Department, in cooperation with the U. S. Bureau of Public Roads, undertook what is known as a State-wide Highway Planning Survey. The Planning Survey is divided into three major parts: first, a Rural Road Inventory; second, a Traffic Survey; and, third, a Financial Survey.

The Rural Road Inventory includes a complete physical inventory of some 48,000 miles of road including primary and secondary state highways, county roads, forest development roads, etc. Parties were sent into the field to obtain by automobile odometer surveys the mileages of the various roads and the locations of structures and other features.

The widths of roadway, types of surfacing, types of bridges and other structures, grades, curvature and locations of adjacent houses and buildings were obtained, and reconnaissance estimates were made of costs of improving the roads to standards commensurate with expected traffic.

Particular attention was given to rail and highway grade crossings. On the primary system the sight distances at horizontal and vertical curves were ascertained as well as the superelevations of horizontal curves.

From the information obtained in the field, straight-line charts have been made for each road. Maps on a scale of one inch to one mile are now being made for each county. These maps will be quite complete and will include information not available on the usual county map.

The Traffic Survey is far more detailed than any similar survey that has been made by the Department. Traffic density is being obtained on all roads in the state, a segregation being made as to types of vehicles. Other field parties operating at strategic points on predetermined schedule are obtaining the following information:

1. Average daily density of passenger car, truck and bus traffic.
2. Maximum daily density of passenger car, truck and bus traffic.
3. Hourly, daily, and seasonal fluctuation of passenger car, truck and bus traffic.
4. Classification of truck and bus traffic by weight.
5. Wheel loads, gross loads and dimensions of trucks and busses.
6. Origin and destination of traffic by locality.
7. Character, volume and origin and destination of all commodities moved over the highways.

The Financial Survey will make a study of highway taxation in general. A comparison of present tax policies with relation to an equitable tax policy based upon the benefits derived from road construction will be made. The amounts, sources and disbursements of present road revenues will be determined, with particular relation to the relative amounts of such revenues collected from urban and rural taxpayers. These facts should lead to a determination of the relationship between the taxes paid by each group in comparison to the benefits derived. A study of the flow of rural and urban traffic will be made to determine those roads and streets which are in general use by the motoring public in comparison to those roads and streets which furnish a special use to particular individuals.

The Financial Survey will also determine an equitable adjustment of highway taxation between the various types of motor vehicles in proper proportion to the facilities furnished and the use that is made of them. The survey will furnish economic yardsticks for the determination of the feasibility of the construction of various projects and the relative importance of each of them. The objectives of the entire survey may be summed up as follows:

1. The recording of the present status of all the roads in the state, showing the relationship between the degree of the improvement and the traffic each road is now carrying, and on the basis of this record, the indicating of the amount, kind and cost of further improvement required to give satisfactory transportation service.

2. From the record secured, to select an integrated highway system with an indicated priority of improvement.

3. To properly budget highway operations and recommend the sources from which the necessary revenues, properly related to benefits conferred, should be secured.

Approximately 90 per cent of the cost of the survey is being paid from federal funds. It would have been impossible to have conducted a survey of this magnitude from state funds alone. Some WPA labor has been used on certain phases of the work.

The field work was begun about April 1, 1936, and it is believed that the final tabulations and conclusions can be completed by January 1, 1938.

STATE-WIDE RADIO NETWORK

To keep open the many miles of the state highway system requires constant and certain contacts with all operating personnel. Storms, slides and blizzards which close or make unsafe the highways often destroy or interrupt the ordinary communication systems. To insure constant contact, a state-wide short wave radio network is being installed. Stations with an output of 1,000 watts will be operated at Salem, La Grande and Klamath Falls. Smaller stations of 50 watt capacity will serve Astoria, Portland, The Dalles, Burns, Bend, Coquille and Roseburg. In addition to these, 14 10-watt stations will be installed. Four of these are stationary sets to be placed in highway maintenance quarters at Pendleton, Baker, Grants Pass and Eugene. The remaining 10 stations are portable and will be placed on snow plows and other mobile maintenance equipment. Receiving sets will be placed in cars assigned to maintenance and operating personnel.

The entire network is at the service of the State Police, and will make possible the direction and operation of that organization with maximum efficiency. It is further expected that the radio needs of the State Forester can be taken care of over the same network.

The Federal Government is assisting in the financing of the project through a Federal Emergency Administration of Public Works grant in the amount of 45 per cent of the labor and materials cost but not to exceed the sum of $25,572.00. The total cost of the project is estimated to be $65,313.02, leaving $40,041.02 to be paid from highway funds.

The installation is practically complete, and will be in operation shortly after January 1, 1937.

TOURIST TRAVEL STIMULATION

Organized in November, 1935, primary objective of the Travel and Information Division of the State Highway Department is to draw additional traffic to use Oregon highways with its consequent direct return in an increased gasoline tax yield and in the general benefit to the state through the expenditures by visitors coming from other states and countries.

Toward this objective, approximately $48,000 was spent in 1936 in an advertising and publicity program setting forth the scenic and recreational attractions of Oregon made accessible to the motoring world

through the state's modern highway system. The Department printed booklets presenting in convincing fashion these attractions by word and illustration. More than 234,000 of these booklets and maps were printed and distributed by the Travel and Information department during 1936. They were distributed in response to direct inquiries received by mail, through tourist and travel bureaus, service stations and motor clubs throughout the United States and Canada, and direct to those coming to the department in person seeking information on the state's attractions. More than 1,000 travel directing agencies asked for and were supplied with these booklets and maps during the year.

Total of more than 38,000 persons during the year wrote to the department for information to help them plan trips to Oregon. With plans being perfected for 1937, the department expects to have at least 50,000 requests for Oregon travel information during the year.

In addition to the Travel and Information department's own specially-prepared maps and booklets, approximately 75,000 pieces published by regional organizations, chambers of commerce and resorts were distributed through the department in answering inquirers and supplying travel promotion agencies asking for specific information on specific areas or attractions.

Stories and photographs conducive to increasing interest in traveling Oregon highways were supplied newspapers and magazines throughout the country, particularly to those in western sections of the United States from which the largest percentage of Oregon's nonresident travel is coming at the present time. On a basis of commercial charges, the space devoted to Oregon by these publications using the material supplied by the department would have cost not less than $100,000, according to the department director's estimate. It was accepted and published without cost to the state.

One of the first steps of the newly-created department was to survey by questionnaire Oregon's nonresident motor traffic of 1935. It learned from answers representing 45,000 persons, the average length of stay of visitors from various states and countries; their average daily expenditures; the attractions in Oregon that appealed to them most; their magazine reading habits and many other factors of inestimable value in planning the travel promotion program of 1936 and subsequent years.

Nonresident motorist registrations of 1936 and gasoline tax collections for the year are an index to the effectiveness of the program. To December 1 of 1936, a total of 134,772 automobiles had been registered as visitors to the state, a figure shattering by a long margin the total for any entire year in the past; a gain of approximately 39 per cent over the corresponding period of 1935. Calculating from the best data available, the Highway Department estimates that these nonresident motorists left around $750,000 in gasoline tax during 1936.

Taking 1935 index factors on expenditures and average lengths of stay, and applying them to 1936 traffic volume, nonresident motorist visitors spent not less than $18,000,000 in Oregon during the year, a stimulant to the prosperity of the entire state.

The work of the Travel and Information Division of the State Highway Department is directed by Harold B. Say.

THROUGH PONDEROSA PINE FOREST ON THE SANTIAM HIGHWAY WEST OF SISTERS, DESCHUTES COUNTY

SCENE IN YAQUINA BAY STATE PARK AT NEWPORT

STATE PARKS

The years 1935 and 1936 have witnessed a very considerable advancement of Oregon's state park program. The number of parks has been greatly increased by new acquisitions and much development work has been performed.

No less than 3,495 acres of park property have come to the state during the two-year period by donation. An additional 1,435 acres have come to the state through purchase, the total cost amounting to $73,007.94. Inclusive of these additions, the park system now comprises 124 separate areas having a total acreage of 18,963. The classification of these areas, and the acreage of each classification, is as follows:

Classification	Number	Acres
Parks	64	13,630
Timber preservations and wayside strips	21	3,476
Recreational areas (leased from U. S. Government)	10	1,538
Monument sites, parking spaces, viewpoints oases, et cetera	23	110
Water supply areas	6	209
	124	18,963

In the development of the state parks, advantage was taken of the facilities and man-power offered by the Federal Government through its Civilian Conservation Corps. In this manner, with only a nominal expenditure of state funds, development work and improvements of a value running into hundreds of thousands of dollars, were obtained and will remain permanently in the possession of the state for the use and enjoyment of its people. This development work and improvement work extended into 49 separate parks and consisted of clearing-up work, removal of fire hazards, protection against erosion, reforestation, landscaping, trail building, path construction, signing, development of springs, installation of picnic tables, construction of fireplaces, drinking fountains, latrines, community kitchens and caretaker's cottages, and many other very desirable kinds of improvement work.

From four to six camps were in operation at all times, each camp consisting of 160 men, a superintendent, three foremen and such numbers of experienced and skilled workers as the work in hand necessitated. All work performed was performed in accordance with plans jointly approved by the State Parks Superintendent and the National Park Service.

In addition to carrying on development work in state parks throughout the state, the Federal Government is conducting a Recreational Demonstration Project in connection with the state park at Silver Creek Falls, under which project the Federal Government is expanding

the park by acquiring some 5,000 or 6,000 acres of adjoining land and is making a number of very desirable improvements. When the project is finally terminated by the Federal Government, the land acquired and the improvements made will be turned over to the state.

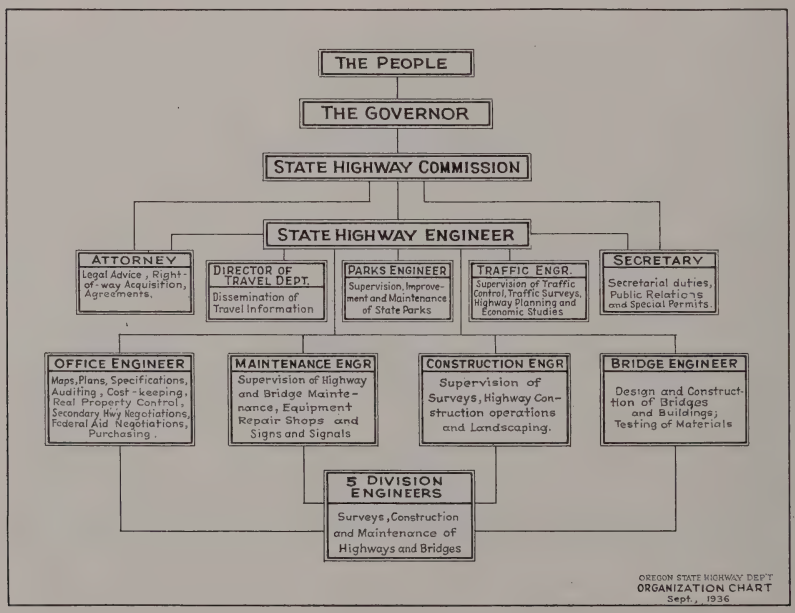
State expenditures made in connection with state parks are as follows:

Class of Expenditure	July 1, 1934, to June 30, 1936	Total Expenditures to Date
Purchase of real property	$49,154.35	$256,025.59
Improvements	12,799.56	148,008.07
Operation and maintenance	12,030.36	61,686.39
Totals	$73,984.27	$465,720.05

The work of improving, maintaining and operating the state parks is supervised by Samuel H. Boardman, Parks Superintendent.

ORGANIZATION

The executive organization of the State Highway Department consists of the State Highway Engineer, the Assistant State Highway Engineer, the Attorney, the Secretary, the Parks Superintendent, the Traffic Engineer, the Director of the Travel and Information Department, and four staff officers.


THE PEOPLE
THE GOVERNOR
STATE HIGHWAY COMMISSION
STATE HIGHWAY ENGINEER
ATTORNEY
Legal Advice, Right-of-way Acquisition, Agreements.
DIRECTOR OF TRAVEL DEPT.
Dissemination of Travel Information
PARKS ENGINEER
Supervision, Improvement and Maintenance of State Parks
TRAFFIC ENGR.
Supervision of Traffic Control, Traffic Surveys, Highway Planning and Economic Studies
SECRETARY
Secretarial duties, Public Relations and Special Permits.
OFFICE ENGINEER
Maps, Plans, Specifications, Auditing, Cost-keeping, Real Property Control, Secondary Hwy Negotiations, Federal Aid Negotiations, Purchasing.
MAINTENANCE ENGR
Supervision of Highway and Bridge Maintenance, Equipment Repair Shops and Signs and Signals
CONSTRUCTION ENGR
Supervision of Surveys, Highway Construction operations and Landscaping.
BRIDGE ENGINEER
Design and Construction of Bridges and Buildings; Testing of Materials
5 DIVISION ENGINEERS
Surveys, Construction and Maintenance of Highways and Bridges
OREGON STATE HIGHWAY DEPT
ORGANIZATION CHART
Sept., 1936

The Assistant State Highway Engineer, C. B. McCullough, who also acted as Bridge Engineer, is now on leave of absence working for the U. S. Bureau of Public Roads in Central America. During his absence, his duties as bridge engineer have been assumed by Glen S. Paxson, Acting Bridge Engineer. The Attorney, J. M. Devers, handles all legal matters for the Commission and superintends the acquiring of rights of way, quarries and other real property. The Secretary, H. B. Glaisyer, attends to numerous duties of secretarial nature and issues highway use permits. The Parks Superintendent, S. H. Boardman, superintends the operation, maintenance and improvement of state parks. The Traffic Engineer, John Beakey, attends to the many problems involved in the direction and control of highway traffic and is in charge of the planning survey now being conducted by the Department. The director of the Travel and Information Division, Harold B. Say, directs the Department's publicity campaign to attract increased tourist travel. The four staff officers and their respective duties are as indicated in the paragraph which follows.

The Office Engineer, S. H. Probert, has charge of the preparation of highway plans and specifications and of such other office functions as auditing, cost keeping and conducting of federal aid negotiations. The Construction Engineer, H. G. Smith, supervises the field engineering work involved in the locating, planning and constructing of highways, and controls and directs the work of highway contractors. The Maintenance Engineer, J. N. Bishop, superintends the work of maintaining highways and bridges and supervises the upkeep and operation of all equipment owned by the Department. The Acting Bridge Engineer, G. S. Paxson, supervises the designing, contracting and constructing of bridges, grade separation structures, and other major structures.

Field Organization—In the performance of the field duties incidental to the supervision and direction of the construction, maintenance and operation of the state highways, there are five division engineers reporting to the staff officers above named.

Each division engineer supervises and directs all surveys, construction work and maintenance work on the state highways within his division. He acts as the local representative of the State Highway Department in dealing with county officers, contractors, and the public in general. In other words, the division engineers are line officers having direct charge of the work, and the work is coordinated so as to bring about a uniformity in surveys, construction and maintenance by the four staff officers, each of whom acts as the personal representative of the state highway engineer in his negotiations with the division engineers.

The maintenance is directed locally by 15 resident maintenance engineers, acting as maintenance superintendents, located within the five divisions, who have direct supervision of 116 section crews, each working under the direction of a section foreman. The maintenance superintendents also supervise the work of the extra gang crews in removing snow, removing slides, re-oiling surfacings, patching pavements, repairing bridges, etc., which work is generally seasonal in character. Their duties are, in general, to see that the proper materials and equipment are supplied, to supervise the work of the section crews and extra gangs, to keep an accurate account of the expense incurred, and in all respects to look after the upkeep of the highways within their respective territories.

When highway location surveys are to be made in a division, a locating engineer is assigned by the construction engineer to perform the work under the supervision of the division engineer. The construction projects are handled by resident construction engineers who are moved from one division to another as the distribution of the work may require. Each resident construction engineer is in charge of one or more contract jobs and his duties are to measure the quantities of work for which the contractor is entitled to payment, to inspect the workmanship and materials, and to insure compliance with the specifications, and to otherwise look after the interests of the state in connection with all matters concerned.

Division No. 1 is in charge of E. A. Collier, with headquarters in Portland. It comprises the counties of Multnomah, Clackamas and Washington and parts of Yamhill, Columbia and Hood River counties.

Division No. 2 is in charge of F. D. Eason, with headquarters at Salem. It comprises the counties of Marion, Linn, Benton, Polk, Lincoln, Tillamook and Clatsop and parts of Columbia and Yamhill counties.

Division No. 3 is in charge of K. D. Lytle, with headquarters at Roseburg. It comprises the counties of Lane, Douglas, Coos, Curry, Josephine and Jackson.

Division No. 4 is in charge of W. E. Chandler, with headquarters at Bend. It comprises the counties of Wasco, Sherman, Jefferson, Crook, Deschutes, Klamath and Lake, and parts of Hood River, Gilliam, Wheeler and Harney counties.

Division No. 5 is in charge of W. C. Williams, with headquarters at La Grande. It comprises the counties of Morrow, Umatilla, Union, Wallowa, Baker, Malheur and Grant, and parts of Gilliam, Wheeler and Harney counties.

Testing of Materials—The work of the Materials Testing Laboratory can be divided into two divisions, the sampling of the materials and the inspection of construction in the field, and the testing of the various materials of construction in the laboratory. Inspectors are stationed on all paving jobs to secure samples and inspect the operations so that immediate changes in the mixes may be made, if desirable. Careful field inspection, combined with laboratory control, saves many thousands of dollars per year in gaining stable and strong mixtures at the lowest possible cost. This is especially true in concrete construction. Materials tested comprise oils, asphalts, bituminous mixtures, cements, gravels, rocks, sands, concrete and steel. By these rigid tests the state is assured that the contractor is complying with specifications.

The work of the Materials Testing Laboratory is directed by N. M. Finkbiner.

Equipment Department—The Equipment Department is directly under the supervision of the maintenance engineer. In view of the fact that practically all of the equipment is used in maintenance operations, the central control of both features, which was placed in effect in 1932, has proven very satisfactory. The Equipment Department repairs and maintains the equipment for which a rental charge is made which includes a depreciation charge which is decreased each year of the life

of the equipment until the first cost is amortized. A perpetual inventory is kept of all state property, and each employe is held responsible for all equipment placed in his charge until relieved of that responsibility by proper authority. Worn out and obsolete equipment and materials, scrap metal, etc., are disposed of by a survey board consisting of one of the state highway commissioners, the state highway engineer and one of the staff officers who appraise the value and dispose of the material on the the basis of competitive bids.

Equipment repair shops are located at Salem, La Grande, Klamath Falls and Coquille.

LEGAL AND RIGHT OF WAY DEPARTMENTS

The increase in volume of work imposed by law on the Highway Commission, augmented by the demands of the motoring public, has made necessary a material increase in the personnel of the department during the progress of the past several years. This enlargement of duties and responsibilities has been shared by the legal department as well as by the other departments. For a number of years the legal work was handled by one person, but as the department developed and the work increased, a staff, consisting of several, became necessary.

It is not to be expected that so vast a volume of work as is carried on by the Highway Department can escape controversy and litigation, especially since of necessity the work of highway construction and maintenance involves so many different and varied interests. There are contractual relations between state and contractor, property rights involved in right of way requirements, alleged patent infringements growing out of the use of alleged patented articles, personal injury and property damage claims which occasionally arise in connection with the operation of the large amount of equipment which is in constant use throughout the state, and there are many other problems and controversies which in the normal course of things will arise in the conduct of a large enterprise such as that carried on by the Highway Commission. Then there is the usual and requisite legal advice and services incident to the routine work and administration of the department, the preparation of contracts, deeds, leases and other instruments and papers.

Originally rights of way were acquired by the counties with some isolated exceptions, both with respect to rights of way and scattered quarry sites and gravel pits, which were acquired by the state. Counties began to complain of the financial burden incident to the acquisition of rights of way, quarry sites, and gravel pits, with the result that the legislature made it possible for the Highway Commission to aid the counties financially in the acquisition of properties for such purposes. As soon as the Highway Commission was given authority to aid the counties financially in the acquisition of such properties the counties more and more shifted the entire burden to the state with the result that in 1932 the Commission adopted a rather extensive program of acquiring rights of way at the expense of the state.

Beginning with the year 1932 a right of way organization was created and placed under the supervision of the legal department, which work has rapidly increased until it now represents a major activity in the Highway Department. In 1935, in response to the obligation imposed upon the Highway Commission by the legislature to which reference has already been made, the Highway Commission adopted the policy of acquiring all rights of way for primary and secondary highways, including quarry sites, gravel pits, stock pile sites and other necessary properties, through its own organization, paying the cost of the same out of state highway funds except in special instances where by special agreement made by the state and a county or a city the county and/or the city acquires or makes available necessary right of way or other real property needed in connection with highway or street improvement within the interested political subdivision or municipality. Pursuant to this policy agreements have been executed by the State Highway Commission with all of the counties of the state, by which it has been agreed that the state will acquire all real property necessary for rights of way, except in some special instances.

The work of the Right of Way Department is, as we have said, under the supervision of the legal department and therefore under the general supervision of J. M. Devers, the Commission's attorney, with J. W. DeSouza, assistant attorney, in direct supervision of the right of way activities. The personnel of the right of way organization consists of a Title Examiner, who is I. M. Schannep, a Real Property Office Assistant, in charge of all office records, and seven right of way agents or buyers who handle the actual field work. In addition there is the necessary office and stenographic help.

During the biennium from July 1, 1934, to June 30, 1936, the department has acquired 986 parcels of land for right of way, 84 parcels of land for quarry sites or gravel pits, 96 parcels of land for stock pile sites, 24 parcels of land for park sites, and 38 parcels of land for miscellaneous purposes. The expenditures for these purposes during the biennium have amounted to approximately $587,684.19.

As this report is written it appears that from July 1, 1936, to the end of the calendar year additional parcels of land have been acquired as follows: right of way, 404; rock quarries and gravel pits, 32; stock pile sites, 38; park sites, 2; miscellaneous sites, 21. It is estimated that the actual cash expenditures during the last half of the calendar year of 1936 will amount to an additional sum of $425,000.

During the past two years 67 condemnation actions have been instituted, some of which were thereafter settled without trial and many of which have been tried. Three suits for alleged violation of patent rights are being defended by the Highway Commission in federal court and there are approximately 12 cases of miscellaneous character pending or disposed of in which the state is interested either as plaintiff or defendant.

Approximately 1,238 deeds and leases have been prepared and approximately 300 contracts prepared or examined for approval during the period covered by this report.

BRIDGE OVER CLACKAMAS RIVER, HIGHWAY NO. 161,
AT ESTACADA, CLACKAMAS COUNTY

OREGON COAST HIGHWAY AT WOAHINK LAKE
SOUTH OF FLORENCE

PART THREE

Financial Statements

Covering the Fiscal Period

July 1, 1934, to June 30, 1936

and

Statistical Information

Pertaining to

State Highways and County Roads

in the

State of Oregon

INDEX TO TABLES

		Page
Table No. 1.	Detailed Summary of Income and Expenditures	84
Table No. 2.	Summary of Expenditures	85
Table No. 3.	Record of Mileages Improved and Maintained	86
Table No. 4.	Yearly Expenditures from Various Funds, 1917 to 1936	87
Table No. 5.	State Funds Received and Expended, 1917 to 1936	87
Table No. 6.	Incomes from Different Sources, 1917 to 1936	88
Table No. 7.	Expenditures for Different Purposes, 1917 to 1936	90
Table No. 8.	Construction Expenditures Classified by Counties, 1917 to 1936	92
Table No. 9.	Construction Expenditures Classified by Highways, 1917 to 1936	93
Table No. 10.	Maintenance Expenditures Classified by Counties, 1917 to 1936	94
Table No. 11.	Maintenance Expenditures Classified by Highways, 1917 to 1936	95
Table No. 12.	Disposition of 1932 Secondary Highway Funds	96
Table No. 13.	Disposition of 1933 Secondary Highway Funds	98
Table No. 14.	Disposition of 1934 Secondary Highway Funds	99
Table No. 15.	Disposition of 1935 Secondary Highway Funds	100
Table No. 16.	Expenditures on Secondary State Highways, 1932 to 1936	101
Table No. 17.	Forest Road Expenditures Classified by Counties, 1917 to 1935	102
Table No. 18.	Forest Road Expenditures Classified by Highways, 1917 to 1935	103
Table No. 19.	Statistics Pertaining to Forest Road Work, 1918 to 1935	104
Table No. 20.	County Disbursements for Road Purposes	105
Table No. 21.	County Indebtedness for Road Purposes	106
Table No. 22.	Apportionment to Counties of Motor Vehicle Fees, 1920 to 1936	107
Table No. 23.	Mileages of Primary State Highways	108
Table No. 24.	Mileages of Primary Highways by Counties	109
Table No. 25.	Mileages of Secondary Highways by Counties	110
Table No. 26.	Mileages of County Roads	111
Table No. 27.	Secondary State Highways	112
Map of State Highway System—Opposite page 112.		
List of Employes of the State Highway Commission		115
List of Persons Rendering Professional or Special Services		155

TABLE NO. 1

DETAILED SUMMARY OF INCOME AND EXPENDITURES

July 1, 1934, to June 30, 1936

This table includes the income and expenditures in both the state highway fund and the coast bridge PWA fund.

INCOME

Classification	Receipts July 1, 1934, to June 30, 1935	Receipts July 1, 1935, to June 30, 1936	Total Receipts July 1, 1934, to June 30, 1936
STATE FUNDS:			
Balance on hand, July 1, 1934	$ 2,313,650.38	$	$ 2,313,650.38
Bond sales	2,000,000.00	5,129,817.03	7,129,817.03
Motor vehicle license fees	1,996,454.82	2,627,122.97	4,623,577.79
Gasoline tax	7,245,443.56	8,365,651.77	15,611,095.13
Motor transportation fees	734,2[illegible]7.3[illegible]	492,894.44	1,227,171.80
Interest on accounts receivable	779.82	288.08	1,067.90
Fines for traffic law violations	15,544.79	21,942.81	37,487.60
Sub-totals of state funds	$14,306,150.53	$16,637,717.10	$30,943,867.63
COUNTY FUNDS:			
Cash remitted to state	$ 158,133.24	$ 149,562.57	$ 307,695.81
Sub-totals of county funds	$ 158,133.24	$ 149,562.57	$ 307,695.81
FEDERAL GOVERNMENT FUNDS:			
Cash remitted to state	$ 4,593,525.05	$ 4,897,777.01	$ 9,491,302.06
Sub-totals of federal funds	$ 4,593,525.05	$ 4,897,777.01	$ 9,491,302.06
FUNDS OF MISCELLANEOUS CONTRIBUTORS:			
Cash remitted to state	$	$ 5,600.00	$ 5,600.00
Construction work paid for direct	3,152.59	4,400.00	7,552.59
Sub-totals of miscellaneous funds	$ 3,152.59	$ 10,000.00	$ 13,152.59
Grand total income	$19,060,961.41	$21,695,356.68	$40,756,018.09

EXPENDITURES

Classification	Expended July 1, 1934, to June 30, 1935	Expended July 1, 1935, to June 30, 1936	Total Expended July 1, 1934, to June 30, 1936
New construction (primary highways)	$ 3,551,226.24	$ 5,091,450.98	$ 8,642,677.22
Construction (secondary highways)	1,161,461.02	789,373.11	1,950,834.13
Major additions and betterments	2,183,193.00	2,171,326.78	4,354,519.78
Special maintenance	141,071.38	163,080.55	304,151.93
Cooperation in forest road work	1,453.53	284,465.05	285,918.58
Minor additions and betterments	198,250.04	164,948.75	363,198.79
General maintenance (primary highways)	1,817,916.04	1,966,008.07	3,783,924.11
General maintenance (secondary highways)	472,133.80	543,473.49	1,015,607.29
Operation of drawbridges and ferries	137,062.37	134,159.75	271,222.12
Rights of way, maintenance stations, etc.	151,782.19	449,575.36	601,357.55
State parks	13,095.63	60,888.64	73,984.27
Equipment and supplies (holding account)	Cr. 101,792.68	Cr. 61,357.90	Cr. 163,150.58
Miscellaneous holding accounts	46,235.61	Cr. 16,270.51	29,965.10
Maturities on bonds	2,175,000.00	6,412,500.00	8,587,500.00
Interest on bonds	1,239,231.26	1,170,607.81	2,409,839.07
Administration and supervision	259,485.14	322,693.62	582,178.76
Surveys (primary highways)	133,089.74	213,447.35	346,537.09
Surveys (secondary highways)	30,192.85	29,891.35	60,084.20
Engineering county construction	2,341.80	745.26	3,087.06
Miscellaneous general expense	39,275.68	95,460.05	134,735.73
Tourist promotion bureau	.....	44,491.35	44,491.35
Contribution to state police	273,963.62	287,751.00	561,714.62
Contribution to counties	1,541,852.76	1,600,000.00	3,141,852.76
Contribution to general fund	.....	121,121.52	121,121.52
Totals	$15,467,521.02	$22,039,831.43	$37,507,352.45

TABLE NO. 2

SUMMARY OF EXPENDITURES
July 1, 1934, to June 30, 1936

The Coast Highway PWA bridge expenditures are included in this table.

Classification	Total Amount Expended	Cooperation in Expenditures			
		State	County	Federal Government	Miscellaneous Contributors
New construction (primary highways)	$ 8,642,677.22	$ 4,333,677.01	$ 199,646.84	$ 4,096,200.78	$ 13,152.59
Construction (secondary highways)	1,950,834.13	332,642.53	23,000.00	1,595,191.60	
Major additions and betterments	4,354,519.78	564,610.10		3,789,909.68	
Special maintenance	304,151.93	304,151.93			
Cooperation in forest road work	285,918.58	200,869.61	85,048.97		
Minor additions and betterments	363,198.79	363,198.79			
General maintenance (primary highways)	3,783,924.11	3,783,924.11			
General maintenance (secondary highways)	1,015,607.29	1,015,607.29			
Operation of drawbridges and ferries	271,222.12	271,222.12			
Rights of way, maintenance stations, etc.	601,357.55	601,357.55			
State parks	73,984.27	73,984.27			
Equipment and supplies (holding account)	Cr. 163,150.58	Cr. 163,150.58			
Miscellaneous holding accounts	29,965.10	29,965.10			
Maturities on bonds	8,587,500.00	8,587,500.00			
Interest on bonds	2,409,839.07	2,409,839.07			
Administration and supervision	582,178.76	582,178.76			
Surveys (primary highways)	346,537.09	346,537.09			
Surveys (secondary highways)	60,084.20	60,084.20			
Engineering county construction	3,087.06	Cr. 6,912.94		13,000.00	
Miscellaneous general expense	134,735.73	134,735.73			
Tourist promotion bureau	44,491.35	44,491.35			
Contribution to state police	561,714.62	561,714.62			
Contribution to counties	3,141,852.76	3,141,852.76			
Contribution to general fund	121,121.52	121,121.52			
Totals	$37,507,352.45	$27,695,201.99	$ 307,695.81	$ 9,491,302.06	$ 13,152.59

TABLE NO. 3

RECORD OF MILEAGES OF VARIOUS CLASSES OF HIGHWAY IMPROVEMENT AND MAINTENANCE WORK PERFORMED ON THE PRIMARY STATE HIGHWAY SYSTEM

The mileages given in these tables include all state and county cooperative work, all federal aid work, and such county work on state highways as has been paid for on vouchers drawn by the State Highway Department. Forest road work and work performed by county forces or under county contracts are not included.

NEW CONSTRUCTION

Year	Concrete Pavement (Miles)	Bituminous Pavement (Miles)	Bituminous Macadam Wearing Surface (Miles)	Rock and Gravel Surfacing (Miles)	Grading (Miles)	Bridges Over 20 Feet (No.)	Grade Separations (No.)
1913-1928	178.3	551.5	107.6	2,347.1	2,638.8	673	11
1929	3.8	.....	51.5	51.0	113.4	25	1
1930	6.3	.....	180.0	73.9	160.3	25	3
1931	0.7	.....	134.9	82.3	95.4	34	1
1932	7.6	.....	126.7	81.1	31.1	34	4
1933	16.8	.....	61.9	65 6	55.6	30	....
1934	17.5	.....	103.8	15.2	33.2	70	5
1935	4.4	.....	10.3	28.8	17.5	17	3
1936	3.9	0.1	25.3	18.8	22.1	36	17
Totals	239.3	551.6	802.0	2,763.8	3,167.4	944	45

RECONSTRUCTION AND BETTERMENT

Year	Pavement Resurfacing and Widening (Miles)	Non-skid Treatment of Pavement (Miles)	Rock Surface Oiling (Miles)	Rock and Gravel Resurfacing (Miles)	Grade Widening (Miles)
1913-1928	39.1	12.7	1,194.4	453.0	141.6
1929	4.4	103.0	233.3	68.7	48.8
1930	10.5	124.0	144.4	187.1	146.8
1931	3.8	169.6	247.9	135.1	168.8
1932	50 3	3.0	84.4	93.0	205.4
1933	20.1	.....	9.8	19.7	72.7
1934	40.8	.....	72.4	35.5	38.8
1935	16.0	.....	11.5	23.8	14.7
1936	30.5	28.6	256.0	159.5	110.6
Totals	215.5	440.9	2,254.1	1,145.4	948.2

MAINTENANCE

Year	Concrete Pavement (Miles)	Bituminous Pavement (Miles)	Bituminous Macadam Surfacing (Miles)	Oiled Rock Surfacing (Miles)	Unoiled Rock Surfacing (Miles)	Graded and Unimproved Earth Road (Miles)	Total (Miles)
1929	194	534	143	1,174	1,249	258	3,552
1930	209	543	250	1,312	1,219	148	3,672
1931	216	599	399	1,543	964	254	3,975
1932	217	600	516	1,451	895	366	4,045
1933	235	592	665	1,380	1,080	262	4,214
1934	238	534	827	1,428	1,009	248	4,284
1935	246	582	854	1,423	982	341	4,428
1936	250	580	900	1,675	749	406	4,560

See previous reports for details covering years prior to 1929.

TABLE NO. 4

YEARLY EXPENDITURES ON WORK HANDLED UNDER THE SUPERVISION OF THE STATE HIGHWAY COMMISSION
Years 1917 to 1936

The Coast Highway PWA bridge expenditures are included in this table.

Year	State Funds	County Funds	Government Funds	Miscellaneous Contributors' Funds	Totals
1917	$ 674,249.61	$ 270,162.37	$	$	$ 944,411.98
1918	2,214,007.87	439,562.42			2,653,570.29
1919	6,248,304.16	368,550.01	224,851.60		6,841,705.77
1920	11,381,606.97	868,539.59	1,096,027.33	17,661.62	13,363,835.51
1921	15,000,824.65	985,831.42	2,181,956.65	46,378.16	18,214,990.88
1922	7,724,688.96	3,814,402.13	1,043,695.07	33,341.49	12,616,127.65
1923	7,287,991.77	2,199,707.40	1,719,088.71	129,634.73	11,336,422.61
1924	6,916,867.91	1,586,176.49	1,118,777.53	94,241.61	9,716,063.54
1925	10,611,283.45	1,327,243.26	1,327,328.92	62,500.74	13,328,356.37
1926	7,927,130.75	715,701.37	1,264,688.74	78,916.59	9,986,437.45
1927	8,474,609.91	618,679.22	1,111,521.64	58,632.08	10,263,442.85
1928	8,975,204.79	683,625.95	582,440.20	26,973.39	10,268,244.33
1929	10,160,542.57	532,907.15	624,415.28	9,969.29	11,327,834.29
1930	12,808,014.45	280,829.24	1,565,288.34	13,804.57	14,667,936.60
1931	11,108,835.57	256,811 39	4,535,069.46		15,900,716.42
1932	10,962,369.81	165,499.67	1,703,369.15	63,251.92	12,894,490.55
1933	9,740,950.02	168,028.79	2,723,724.39	26,912.05	12,659,615.25
1934	9,397,514.89	174,720.24	6,023,993.01	3,522.50	15,599,751.64
1935	15,564,606.67	133,562.57	4,165,503.33	10,000.00	19,873,671.57
1936 (to June 30)	6,600,772.69	16,000.00	2,310,280.18		8,927,052.87
Totals	$179,780,377.47	$15,606,540.68	$35,322,019.53	$675,740.74	$231,384,678.42

TABLE NO. 5

STATE FUNDS RECEIVED AND EXPENDED BY THE STATE HIGHWAY COMMISSION, 1917 TO 1936

Year	Net Receipts (State Funds Only)	Net Expenditures
1917 (including $94,418.14 balance from 1916)	$ 1,802,190.22	$ 674,249.61
1918	1,759,600.15	2,214,007.87
1919	7,458,614.05	6,248,304.16
1920	11,320,354.05	11,381,606.97
1921	13,550,136.40	15,000,824.65
1922	9,608,966.45	7,724,688.96
1923	7,664,977.79	7,287,991.77
1924	6,115,536.48	6,916,867.91
1925	10,231,908.30	10,611,283.45
1926	7,345,080.19	7,927,130.75
1927	8,627,279.00	8,474,609.91
1928	8,721,396.09	8,975,204.79
1929	10,658,473.58	10,160,542.57
1930	13,897,663.65	12,808,014.45
1931	10,930,545.38	11,108,835.57
1932	10,075,665.72	10,962,369.81
1933	9,685,378.51	9,740,950.02
1934	10,678,849.29	9,397,514.89
1935	16,347,505.71	15,564,606.67
1936 (to June 30)	6,548,922.10	6,600,772.69
Totals	*183,029,043.11	†179,780,377.47
Balance on hand July 1, 1936		3,248,665.64
Totals	$183,029,043.11	$183,029,043.11

* Includes $3,011,805.00 received from sale of refunding bonds in 1925, $1,001,318.86 from sale of short-term bonds in 1932, $1,460,686.71 from sale of short-term bonds in 1933, and $2,893,283.86 from sale of refunding bonds in 1935.

† Includes $3,000,000 used to refund short-term bonds in 1925, $1,000,000 in 1932, and $3,000,000 in 1935.

TABLE NO. 6

SCHEDULE OF YEARLY INCOMES FROM DIFFERENT SOURCES
1917 to 1936, Inclusive

The Coast Highway PWA bridge income items are included in this table.

Source of Income	1917-1929 Inclusive	1930	1931	1932	1933
Balance on hand December 1, 1916	$ 94,418.14	$	$	$	$
Bond sales	40,708,819.37	1,531,426.67	995,851.40	*1,001,318.86	*1,460,686.71
Motor vehicle license fees	35,912,083.39	5,866,256.71	3,677,284.60	3,178,932.63	2,043,084.96
Gasoline and distillate tax	25,588,333.27	6,102,186.60	5,940,088.18	5,591,823.14	5,954,052.71
Motor transport fees	274,265.62	401,614.34	261,988.59	248,196.74	195,140.40
One-quarter mill property tax	1,724,032.33				
Interest on bank balances	412,912.25	36,061.08	32,959.22	39,689.12	21,202.56
Fines for traffic violations	149,648.38	20,118.25	22,373.39	15,705.23	11,211.17
Sub-totals (all state funds)	$104,864,512.75	$ 13,897,663.65	$ 10,930,545.38	$ 10,075,665.72	$ 9,685,378.51
County cooperation	14,411,088.78	280,829.24	256,811.39	165,499.67	168,028.79
Federal government cooperation	12,294,791.67	1,565,288.34	4,535,069.46	1,703,369.15	2,723,724.39
Miscellaneous cooperation	558,249.70	13,804.57		63,251.92	26,912.05
Totals	$132,128,642.90	$ 15,757,585.80	$ 15,722,426.23	$ 12,007,786.46	$ 12,604,043.74

TABLE NO. 6—Continued

SCHEDULE OF YEARLY INCOMES FROM DIFFERENT SOURCES
1917 to 1936, Inclusive

Source of Income	1917-1933 Inclusive	1934	1935	1936 (to June 30)	Dec. 1, 1916, to June 30, 1936
Balance on hand December 1, 1916	$ 94,418.14	$	$	$	$ 94,418.14
Bond sales	*45,698,103.01	†1,016,000.00	†5,413,817.03	†700,000.00	52,827,920.04
Motor vehicle license fees	50,617,642.29	1,876,039.76	2,419,379.29	1,938,760.17	56,851,821.51
Gasoline and distillate tax	49,176,483.90	7,165,967.51	7,817,198.85	3,767,882.28	67,927,532.54
Motor transportation fees	1,381,205.69	603,032.66	678,609.13	131,069.08	2,793,916.56
One-quarter mill property tax	1,724,032.33	.....	.....	.....	1,724,032.33
Interest on bank balances	542,824.23	357.34	576.53	166.67	543,924.77
Fines for traffic violations	219,056.42	17,452.02	17,924.88	11,043.90	265,477.22
Sub-totals (all state funds)	$149,453,766.01	$ 10,678,849.29	$ 16,347,505.71	$ 6,548,922.10	$183,029,043.11
County cooperation	15,282,257.87	174,720.24	133,562.57	16,000.00	15,606,540.68
Federal government cooperation	22,822,243.01	6,023,993.01	4,165,503.33	2,310,280.18	35,322,019.53
Miscellaneous cooperation	662,218.24	3,522.50	10,000.00	.....	675,740.74
Totals	$188,220,485.13	$ 16,881,085.04	$ 20,656,571.61	$ 8,875,202.28	$234,633,344.06

* Includes $3,011,805 received in connection with refunding of $3,000,000 of short term bonds in 1925, $1,001,318.86 received from sale of six-months' bonds in 1932, and $1,460,686.71 received from sale of five-year bonds in 1933.

† In connection with the construction of the five Oregon Coast bridges, PWA project, $4,200,000 of short-term bonds were issued, of which $1,000,000 were sold in 1934, $2,500,000 in 1935 and $700,000 in 1936. $3,000,000 of these bonds were refunded by a like amount of 20-year bonds sold in 1935, and the balance of $1,200,000 was paid from current revenues.

TABLE NO. 7

SCHEDULE OF YEARLY EXPENDITURES

1917 to 1936, Inclusive

The expenditures in this table include all expenditures in connection with work handled under the direct supervision of the State Highway Commission during the period of December 1, 1916, to June 30, 1936. They do not include expenditures by the Federal Government and counties on forest highway work, and they do not include expenditures in connection with market road work, but they do include expenditures during 1934, 1935 and 1936, for the construction of the five Coast Bridge PWA Projects.

Classification of Expenditures	1917-1929 Inclusive	1930	1931	1932	1933
New construction (primary highways)	$ 72,191,629.70	$ 3,416,815.17	$ 4,177,311.52	$ 1,765,483.90	$ 1,832,933.53
Construction (secondary highways)	.....	.....	.....	542,996.55	436,058.90
Major additions and betterments	3,349,364.54	3,535,789.74	3,773,451.27	2,860,236.70	2,192,315.55
Special maintenance	3,997,207.06	115,363.84	101,851.73	89,550.60	112,323.87
Cooperation in forest road work	3,719,598.85	696,986.98	653,385.58	202,700.00	138,913.87
Minor additions and betterments	2,269,658.78	561,980.09	1,268,782.15	422,720.29	122,152.14
General maintenance (primary highways)	14,066,321.83	2,250,082.43	1,857,164.33	1,804,703.71	1,572,643.39
Maintenance (secondary highways)	.....	.....	.....	159,957.76	388,759.92
Operation of drawbridges and ferries	138,508.57	52,287.98	64,392.46	88,087.91	100,869.89
Rights of way, patrol stations, etc.	268,876.49	139,188.71	169,237.50	198,073.51	237,106.42
Parks and timber preservations	195,767.20	64,612.80	69,035.69	43,734.66	12,330.95
Equipment and supplies (holding account)	441,941.48	13,210.18	Cr. 97,583.83	Cr. 293,865.66	Cr. 122,784.75
Retirement of bonds	10,808,250.00	1,925,000.00	1,975,000.00	2,975,000.00	1,975,000.00
Interest and other bond expense	15,090,424.01	1,419,678.64	1,387,533.33	1,370,444.71	1,292,444.91
Administration and supervision	2,206,965.03	261,893.86	231,162.00	217,778.26	219,891.44
Surveys (primary highways)	1,245,281.79	104,713.66	122,942.41	264,636.71	158,314.92
Surveys (secondary highways)	.....	.....	.....	10,826.26	36,561.86
Engineering county construction	154,781.76	3,387.98	25,877.97	6,196.56	15,098.28
Miscellaneous general expense	368,044.85	20,151.52	46,180.13	9,874.57	51,045.68
Contribution to state police	348,821.58	86,793.02	74,992.18	155,353.55	287,634.48
Contributions to counties	.....	.....	.....	.....	1,600,000.00
Totals	$130,861,443.52	$ 14,667,936.60	$ 15,900,716.42	$ 12,894,490.55	$ 12,659,615.25

TABLE No. 7—Continued

SCHEDULE OF YEARLY EXPENDITURES

1917 to 1936, Inclusive

Classification of Expenditures	1917-1933 Inclusive	1934	1935	1936 (to June 30)	Dec. 1, 1916, to June 30, 1936
New construction (primary highways)	$ 83,384,173.82	$ 2,638,006.47	$ 4,857,533.91	$ 2,208,207.82	$ 93,087,922.02
Construction (secondary highways)	979,055.45	1,395,465.57	959,004.69	365,717.30	3,699,243.01
Major additions and betterments	15,711,157.80	2,915,153.20	1,617,495.98	1,216,783.72	21,460,590.70
Special maintenance	4,416,297.10	148,263.28	155,456.07	96,225.85	4,816,247.30
Cooperation in forest road work	5,411,585.28	28,416.93	52,501.65	205,000.00	5,697,503.86
Minor additions and betterments	4,645,293.45	179,349.13	161,381.65	71,892.09	5,057,916.32
General maintenance (primary highways)	21,550,915.69	1,770,570.81	1,849,887.74	922,299.63	26,093,673.87
Maintenance (secondary highways)	548,717.68	499,218.16	505,270.76	272,912.92	1,826,119.52
Operation of drawbridges and ferries	444,146.81	130,611.94	136,844.08	60,675.79	772,278.62
Rights of way, patrol stations, etc. (primary highways)	1,012,482.63	212,208.30	159,009.27	289,315.65	1,673,015.85
Rights of way, patrol stations, etc. (secondary highways)	.....	.....	30,625.47	39,737.88	70,363.35
Parks and timber preservations	385,481.30	12,152.85	28,362.71	39,723.19	465,720.05
Equipment and supplies (holding account)	Cr. 59,082.58	Cr. 155,025.19	Cr. 49,598.73	Cr. 3,800.16	Cr. 267,506.66
Miscellaneous holding accounts	.....	.....	31,508.33	Cr. 1,543.23	29,965.10
Retirement of bonds	19,658,250.00	2,175,000.00	5,675,000.00	1,975,000.00	*29,483,250.00
Interest and other bond expense	20,560,525.60	1,250,910.02	1,228,652.23	560,701.52	23,600,789.37
Administration and supervision	3,137,690.59	263,233.99	290,676.96	162,887.91	3,854,489.45
Surveys (primary highways)	1,895,889.49	169,248.10	191,420.45	97,264.40	2,353,822.44
Surveys (secondary highways)	47,388.12	33,192.70	18,944.15	21,899.54	121,424.51
Engineering county construction	205,342.55	2,341.80	745.26	1,569.60	209,999.21
Travel and information department	.....	.....	7,197.13	37,294.22	44,491.35
Miscellaneous general expense	495,296.75	57,913.63	88,168.96	22,290.21	663,669.55
Contribution to state police	953,594.81	273,514.95	277,582.85	143,875.50	1,648,568.11
Contribution to counties	1,600,000.00	1,600,000.00	1,600,000.00	.....	4,800,000.00
Contribution to general fund	.....	.....	.....	121,121.52	121,121.52
Totals	$186,984,202.34	$ 15,599,751.64	$ 19,873,671.57	$ 8,927,052.87	$231,384,678.42

* Includes disbursements for refunding of short-term bonds amounting to $3,000,000 in 1925, $1,000,000 in 1932, and in connection with the Oregon Coast Bridge financing, $3,500,000 in 1935 and $700,000 in 1936.

TABLE NO. 8

EXPENDITURES FOR PRIMARY HIGHWAY CONSTRUCTION WORK CLASSIFIED BY COUNTIES

Years 1917 to 1936, Inclusive

This table gives the totals of the expenditures made for primary highway construction work in each of the several counties during the 20-year period ending June 30, 1936. It includes expenditures for new construction, additions and betterments, surveys and the engineering of county construction. It includes also state expenditures in connection with forest highway work, and the expenditures for the construction of the five Coast Highway bridge projects. It does not include expenditures for maintenance work, secondary highways, or the expenditures of the Federal Government and counties in connection with forest highway construction work.

County	Total Amount Expended	Cooperation in Expenditures			
		By State	By County	By Federal Government	By Miscellaneous Contributors
Baker	$ 4,624,129 20	$ 2,132,845.50	$ 1,025,549.83	$ 1,380,647.24	$ 85,086.63
Benton	2,810,998.41	1,966,599.94	372,439.94	463,338.27	8,620.26
Clackamas	4,852,154.71	2,833,090.31	573,751.86	1,356,012.57	89,299.97
Clatsop	5,227,029.11	3,011,226.67	448,473.33	1,767,329.11	.....
Columbia	2,328,141.21	2,112,045.92	13,762.86	202,332.43	.....
Coos	5,643,157.96	3,550,977.01	825,197.50	1,244,958.22	22,025.23
Crook	1,144,246.43	802,029.88	232,482.50	109,734.05	.....
Curry	4,646,448.97	3,110,996.63	227,542.72	1,307,909 62	.....
Deschutes	2,059,122.54	1,223,548.99	196,336.69	620,169.07	19,067.79
Douglas	10,626,234.55	7,103,272.92	1,207,557.38	2,285,960.17	29,444.08
Gilliam	2,098,601.60	1,343,932.61	276,214.72	478,454.27	.....
Grant	2,353,288.34	1,072,895.45	193,600.65	1,086,792 24	.....
Harney	1,575,460.46	518,469.92	151,897.87	905,092.67	.....
Hood River	2,695,246.47	2,320,805.11	283,001.46	91,439.90	.....
Jackson	5,494,725.84	3,609,764.29	533,952.88	1,307,586.49	43,422.18
Jefferson	674,492.04	375,147.27	142,282.18	156,322.59	740.00
Josephine	3,350,014.68	2,716,195.63	110,077.78	483,741.27	.....
Klamath	4,949,341.74	2,611,664.25	782,426.92	1,520,719 23	34,531.34
Lake	1,908,167.98	924,520.02	257,727.91	725,920.05	.....
Lane	8,440,651.85	4,967,387.15	1,568,166.95	1,853,448.63	51,649.12
Lincoln	6,093,719.35	4,391,169.83	211,973.57	1,489,828.98	746.97
Linn	2,592,0[illegible]5.94	1,544,537.48	529,690.27	465,029 00	61,799.19
Malheur	3,303,542.52	2,049,309.30	270,722.44	953,510.78	30,000.00
Marion	2,420,595.49	1,213,945.17	284,258 78	922,153.09	238.45
Morrow	1,257,966.49	938,447.77	319,518.72	.....	.....
Multnomah	3,322,307.86	1,707,670.45	67,345.12	1,547,292.29	.....
Polk	2,523,264.13	1,775,901.22	158,311.16	589,051.75	.....
Sherman	1,727,784.69	739,465.58	274,322.61	712,248.71	1,747.79
Tillamook	3,712,408.27	2,251,529.12	512.613 85	922,222.03	26,043.27
Umatilla	5,420,327.31	3,313,046.01	741,971.20	1,339,001.32	26,308.78
Union	3,396,426.22	1,973,911.89	653,772.11	654,586.15	114,156.07
Wallowa	1,201,451.20	624,572.12	352,766.38	224,112.70	.....
Wasco	5,300,446.60	2,624,703.39	897,923.76	1,769,589.79	10,229.66
Washington	2,580,317.97	1,833,472.09	117,362.50	621,403.06	8,080.32
Wheeler	2,209,816.02	1,209,430.74	189,078.49	811,306.79	.....
Yamhill	3,163,719.39	1,974,580.97	466,321.33	712,208.01	10,609.08
Undistributed expense	139,951.01	139,951.01	.....	.....	.....
Totals	$127,867,754.55	$ 78,653,059.61	$15,459,396.22	$33,081,452.54	$673,846.18
Expended for maintenance	31,682,199.79	31,508,253.90	105,163.73	66,887.60	1,894.56
Secondary highways	5,717,150.39	3,511,400.02	32,070.98	2,173,679.39	.....
General purposes	66,117,573.69	66,107,663.94	9,909.75	.....	.....
Grand totals	$231,384,678.42	$179,780,377.47	$15,606,540.68	$35,322,019.53	$675,740.74

TABLE NO. 9
EXPENDITURES FOR PRIMARY HIGHWAY CONSTRUCTION WORK CLASSIFIED BY HIGHWAYS
Years 1917 to 1936, Inclusive

This table gives the totals of the expenditures made for primary highway construction work upon each of the several state highways during the 20-year period ending June 30, 1936. It includes expenditures for new construction, additions and betterments, surveys and the engineering of county construction. It includes also state expenditures in connection with forest highway work, and the expenditures for the construction of the five Coast Highway bridge projects. It does not include expenditures for maintenance work, secondary highways, or the expenditures of the Federal Government and counties in connection with forest highway construction work.

Hwy. No.	Highway	Total Amount Expended	Cooperation in Expenditures			
			By State	By County	By Federal Government	By Miscellaneous Contributors
1	Pacific	$ 19,579,855.59	$ 14,632,151.33	$ 1,118,418.17	$ 3,595,276.19	$234,009.90
2	Columbia River	13,286,312.25	10,048,163.99	234,792.70	2,979,199.10	24,156.46
3	West Side Pacific	6,220,938.00	3,899,082.70	397,512.51	1,905,653.39	18,689.40
4	The Dalles-California	5,668,021.93	2,542,384.08	1,247,311.64	1,832,169.12	46,157.09
5	John Day	4,431,773.51	2,248,960.50	660,545.24	1,522,267.77	
6	Old Oregon Trail	8,328,947.28	4,622,318.65	872,181.57	2,652,680.56	181,766.50
7	Central Oregon	2,780,620.97	1,567,968.16	95,046.98	1,117,605.83	
8	Oregon-Washington	2,767,982.12	2,148,459.76	461,907.95	157,614.41	
9	Oregon Coast	22,668,209.60	14,188,479.42	2,135,690.13	6,308,824.58	35,215.47
10	Wallowa Lake	1,921,250.04	1,001,894.09	533,150.81	381,125.14	5,080.00
11	Enterprise-Flora	272,107.17	200,485.68	71,621.49		
12	Baker-Homestead	949,396.22	325,180.98	495,476.18	128,739.06	
13	Baker-Unity	754,217.53	411,704.54	331,113.14	11,399.85	
14	Crooked River	449,506.53	351,005.55	98,500.98		
15	McKenzie	2,001,761.29	956,605.39	426,976.14	618,179.76	
16	Santiam	1,025,029.65	612,650.78	232,885.28	139,829.35	39,664.24
17	McKenzie-Bend	63,682.55	63,682.55			
18	Willamette	1,084,730.46	427,859.74	287,399.69	369,471.03	
19	Fremont	1,375,405.96	580,413.44	214,586.47	580,406.05	
20	Klamath Falls-Lakeview	1,513,403.86	1,098,424.68	256,844.81	156,811.96	1,322.41
21	Green Springs	1,797,131.07	779,576.92	550,159.73	460,534.79	6,859.63
22	Crater Lake	1,700,479.99	1,195,781.42	188,000.00	316,698.57	
23	Dairy-Bonanza	138,758.69	103,894.89	34,863.80		
24	Burns-Crane	369,982.87	165,820.66	48,156.79	156,005.42	
25	Redwood	954,973.80	623,336.03	54,507.82	277,129.95	
26	Mt. Hood	2,272,720.04	1,550,210.33	507,737.08	214,772.63	
27	Alsea	1,303,096.59	973,994.63	278,757.08	50,344.88	
28	Pendleton-John Day	1,183,772.10	492,387.31	140,056.63	551,328.16	
29	Tualatin Valley	2,023,209.72	1,438,502.13	201,643.95	383,063 64	
30	Salem-Dallas	980,875.62	456,217.49	295,472.12	229,186.01	
31	Albany-Corvallis	579,075.28	112,296.85	165,101.15	299,593.00	2,084.28
32	McMinnville-Tillamook	1,337,849.95	1,204,185.33	75,020.38	58,644.24	
33	Corvallis-Newport	1,556,414.18	1,063,960.22	266,129.35	217,704.35	8,620.26
34	Siuslaw	1,464,438.55	1,038,615.51	382,462.64	43,360.40	
35	Coos Bay-Roseburg	1,874,670.80	966,057.39	651,940.43	243,072.98	13,600.00
36	Pendleton-Cold Springs	389,167.52	167,265.61	191,239.44	30,662.47	
37	Wilson River	382,385.02	80,751.69		301,633.33	
38	Oregon Caves	473,115.95	459,115.95	14,000.00		
39	Salmon River	391,983.93	315,566.22	12,641.65	63,776.06	
40	Bertha-Beaverton	212,713.10	136,713.10		76,000.00	
41	Ochoco	1,809,431.04	1,063,357.56	173,593.13	572,480.35	
42	Sherman	1,038,758.55	291,226.91	360,879.73	384,904.12	1,747.79
43	Monmouth-Independence	68,973.19	68,973.19			
44	Wapinitia	669,793.87	443,529.22		226,264.65	
45	Umpqua	1,502,308.11	175,857.07	353,770.46	972,680.58	
46	East Portland-Oregon City	1,160,756.19	350,691.42		809,970.20	94.57
47	Wolf Creek	1,036,086.22	237,679.24		798,406.98	
48	John Day-Burns	5,905.73	5,905.73			
49	Lakeview-Burns	282,399.38	51,053.91	31,604.06	199,741.41	
	Undistributed	1,763,374.99	712,659.67	309,696.92	686,240.22	54,778.18
	Totals	$127,867,754.55	$ 78,653,059.61	$15,459,396.22	$33,081,452.54	$673,846.18
	Expenditures for maintenance work	$ 31,682,199.79	$ 31,508,253.90	$ 105,163.73	$ 66,887.60	$ 1,894.56
	Expenditures for secondary highways	5,717,150.39	3,511,400.02	32,070.98	2,173,679.39	
	Expenditures for general purposes	66,117,573.69	66,107,663.94	9,909.75		
	Grand totals	$231,384,678.42	$179,780,377.47	$15,606,540.68	$35,322,019.53	$675,740.74

TABLE NO. 10

EXPENDITURES FOR PRIMARY HIGHWAY MAINTENANCE WORK CLASSIFIED BY COUNTIES

Years 1917 to 1936, Inclusive

This table gives the totals of expenditures made for maintenance work in each of the several counties during the 20-year period ending June 30, 1936. It includes all expenditures for special maintenance, general maintenance and operation of drawbridges and ferries.

County	Total Amount Expended	Cooperation in Expenditures			
		By State	By County	By Federal Government	By Miscellaneous Contributors
Baker	$ 1,333,365.37	$ 1,332,575.59	$ 789.78	$	$
Benton	831,681.50	831,365.69	315.81		
Clackamas	818,977.09	818,736.12	240.97		
Clatsop	865,445.31	842,849.40	21,701.35		894.56
Columbia	439,771.15	439,771.15			
Coos	1,569,830.45	1,537,819.54	10,622.89	21,388.02	
Crook	312,039.45	312,039.45			
Curry	795,624.43	791,246.57	205.18	4,172.68	
Deschutes	817,752.10	817,512.00	240.10		
Douglas	1,621,365.64	1,616,582.42	4,783.22		
Gilliam	831,230.87	828,931.73	2,299.14		
Grant	547,290.05	544,859.88	2,430.17		
Harney	189,296.24	189,184.32	111.92		
Hood River	860,116.56	860,116.56			
Jackson	1,304,103.09	1,299,280.62	4,822.47		
Jefferson	300,132.17	300,132.17			
Josephine	574,641.26	572,999.67	1,641.59		
Klamath	2,185,108.23	2,183,892.16	48.52	1,167.55	
Lake	483,225.32	483,225.32			
Lane	1,370,526.60	1,368,519.54	2,007.06		
Lincoln	1,183,725.61	1,183,405.11	320.50		
Linn	479,099.52	476,219.06	2,880.46		
Malheur	843,068.72	842,608.96	459.76		
Marion	357,773.51	357,563.10	210.41		
Morrow	729,020.73	726,044.00	2,976.73		
Multnomah	361,023.90	361,023.90			
Polk	423,552.29	422,953.22	599.07		
Sherman	474,955.58	474,955.58			
Tillamook	1,126,109.57	1,116,329.98	8,779.59		1,000.00
Umatilla	2,132,060.19	2,084,201.31	7,699.53	40,159.35	
Union	1,345,335.15	1,344,820.46	514.69		
Wallowa	541,107.62	541,107.62			
Wasco	1,054,191.43	1,053,414.82	776.61		
Washington	291,450.52	279,909.77	11,540.75		
Wheeler	437,056.29	435,362.57	1,693.72		
Yamhill	773,509.06	759,057.32	14,451.74		
Undistributed expense	1,077,637.22	1,077,637.22			
Totals	$31,682,199.79	$31,508,253.90	$105,163.73	$ 66,887.60	$ 1,894.36

TABLE No. 11

EXPENDITURES FOR PRIMARY HIGHWAY MAINTENANCE WORK CLASSIFIED BY HIGHWAYS

Years 1917 to 1936, Inclusive

This table gives the totals of expenditures made for maintenance work upon each of the several primary state highways during the 20-year period ending June 30, 1936. It includes all expenditures for special maintenance, general maintenance and operation of drawbridges and ferries.

Hwy. No.	Highway	Total Amount Expended	Cooperation in Expenditures			
			By State	By County	By Federal Government	By Miscellaneous Contributors
1	Pacific	$ 2,795,002.65	$ 2,779,216.47	$ 15,786.18	$	$
2	Columbia River	2,907,603.46	2,894,152.50	12,556.40		894.56
3	West Side Pacific	546,108.51	539,910.58	6,197.93		
4	The Dalles-California	2,652,567.00	2,650,972.55	769.57	824.88	
5	John Day	1,484,577.82	1,479,519.83	5,057.99		
6	Old Oregon Trail	3,618,584.65	3,575,167.13	3,258.17	40,159.35	
7	Central Oregon	281,193.12	281,177.67	15.45		
8	Oregon-Washington	847,347.43	841,995.97	5,351.46		
9	Oregon Coast	4,014,058.55	3,966,196.67	21,301.18	25,560.70	1,000.00
10	Wallowa Lake	920,605.58	920,605.58			
11	Enterprise-Flora	88,108.32	88,108.32			
12	Baker-Homestead	234,384.80	233,595.02	789.78		
13	Baker-Unity	156,046.24	156,046.24			
14	Crooked River	55,871.14	55,871.14			
15	McKenzie	630,712.99	630,712.99			
16	Santiam	222,598.55	222,598.55			
17	McKenzie-Bend	92,165.95	92,165.95			
18	Willamette	67,392.85	67,392.85			
19	Fremont	343,891.07	343,891.07			
20	Klamath Falls-Lakeview	406,801.78	406,801.78			
21	Green Springs	705,806.54	705,806.54			
22	Crater Lake	540,000.03	539,657.36		342.67	
23	Dairy-Bonanza	34,463.53	34,463.53			
24	Burns-Crane	70,694.88	70,598.41	96.47		
25	Redwood	247,292.49	247,292.49			
26	Mt. Hood	937,199.93	937,199.93			
27	Alsea	397,022.70	397,022.70			
28	Pendleton-John Day	110,056.35	110,056.35			
29	Tualatin Valley	262,674.58	252,681.37	9,993.21		
30	Salem-Dallas	144,190.87	144,137.92	52.95		
31	Albany-Corvallis	39,868.23	39,068.23	800.00		
32	McMinnville-Tillamook	1,015,907.12	998,668.75	17,238.37		
33	Corvallis-Newport	781,319.79	780,999.29	320.50		
34	Siuslaw	390,173.76	390,173.76			
35	Coos Bay-Roseburg	1,114,550.11	1,110,711.94	3,838.17		
36	Pendleton-Cold Springs	72,544.08	72,544.08			
37	Wilson River	9,330.66	9,330.66			
38	Oregon Caves	66,960.65	66,960.65			
39	Salmon River	84,005.41	84,005.41			
40	Bertha-Beaverton	25,458.18	23,718.23	1,739.95		
41	Ochoco	440,221.64	440,221.64			
42	Sherman	366,736.04	366,736.04			
43	Monmouth-Independence	14,798.44	14,798.44			
44	Wapinitia	118,817.71	118,817.71			
45	Umpqua	149,167.99	149,167.99			
46	East Portland-Oregon City	28,168.11	28,168.11			
47	Wolf Creek	12,624.06	12,624.06			
48	John Day-Burns	28,336.12	28,336.12			
49	Lakeview-Burns	28,127.15	28,127.15			
	Undistributed expense	1,080,060.18	1,080,060.18			
	Totals	$31,682,199.79	$31,508,253.90	$105,163.73	$ 66,887.60	$ 1,894.56

TABLE NO. 12
DISPOSITION OF 1932 SECONDARY HIGHWAY FUNDS

County	1932 Allotment	Allocated from Administrative Surplus	Total Available for Expenditure	Expended in 1932			
				For Maintenance and Betterment	For Construction	For Surveys	Total
Baker	$ 29,053.87	$	$ 29,053.87	$ 6,430.39	$ 12,876.73	$	$ 19,307.12
Benton	21,874.13	6.00	21,880.13	1,433.42	15,427.42	2,000.00	18,860.84
Clatsop	31,724.71	.....	67,052.50	9,292.14	37,662.06	.....	46,954.20
Clackamas	66,968.13	84.37	31,724.71	.....	31,662.39	.....	31,662.39
Columbia	22,910.16	.....	22,910.16	2,559.93	8,960.40	178.68	11,699.01
Coos	34,720.72	421.71	35,142.43	16,964.34	7,039.12	244.76	24,248.22
Crook	6,826.92	.....	6,826.92	1,820.20	1,565.33	.....	3,385.53
Curry	6,084.17	745.76	6,829.93	.....	2,100.92	390.65	2,491.57
Deschutes	18,181.88	.....	18,181.88	660.44	15,131.07	598.07	16,389.58
Douglas	42,304.72	.....	42,304.72	11,423.83	4,113.98	719.33	16,257.14
Gilliam	12,468.06	.....	12,468.06	.....	11,152.43	.....	11,152.43
Grant	9,988.21	.....	9,988.21	5,098.32	.....	.....	5,098.32
Harney	11,839.65	.....	11,839.65	2,929.11	3,099.14	.....	6,028.25
Hood River	13,332.07	.....	13,332.07	492.62	6,143.50	.....	6,636.12
Jackson	43,337.87	.....	43,337.87	883.82	21,562.59	510.93	22,957.34
Jefferson	6,870.54	.....	6,870.54	.....	5,403.90	331.08	5,734.98
Josephine	10,608.86	898.30	11,507.16	16.27	10,792.04	.....	10,808.31
Klamath	55,113.32	.....	55,113.32	24,385.54	185.52	5,451.57	30,022.63
Lake	14,407.32	.....	14,407.32	2,491.04	11,712.34	.....	14,203.38
Lane	71,786.60	.....	71,786.60	3,000.00	65,338.89	.....	68,338.89
Lincoln	12,283.23	.....	12,283.23	422.31	11,260.00	.....	11,682.31
Linn	44,090.43	.....	44,090.43	18,223.79	19,738.82	.....	37,962 61
Malheur	15,147.17	.....	15,147.17	7,481.84	3,978.36	.....	11,460.20
Marion	72,161.48	.....	72,161.48	.....	43,417.60	.....	43,417.60
Morrow	14,293.25	.....	14,293.25	.....	12,036.97	.....	12,036.97
Multnomah	109,280.72	.....	109,280.72	.....	11,047.19	.....	11,047.19
Polk	24,637.73	.....	24,637.73	6,787.58	14,154.07	.....	20,941.65
Sherman	12,415.47	.....	12,415 47	.....	12,415.47	.....	12,415.47
Tillamook	28,528.55	.....	28,528.55	.....	6,265.12	.....	6,265.12
Umatilla	60,625.10	.....	60,625.10	7,842.45	50,413.00	.....	58,255.45
Union	27,183.68	.....	27,183.68	.....	15,732.30	.....	15,732.30
Wallowa	12,669.50	.....	12,669.50	.....	12,669.50	.....	12,669.50
Wasco	23,830.16	.....	23,830.16	820.34	7,669.74	401.19	8,891.27
Washington	45,195.50	308.20	45,503.70	19,760.00	20,032 67	.....	39,792.67
Wheeler	5,936.94	.....	5,936.94	3,013.64	2,166.94	.....	5,180.58
Yamhill	30,786.54	.....	30,786.54	5,724.40	15,985.19	.....	21,709.59
Totals	$1,069,467.36	$ 2,464.34	$1,071,931.70	$ 159,957.76	$ 530,912.71	$ 10,826.26	$ 701,696.73

TABLE NO. 12—Continued
DISPOSITION OF 1932 SECONDARY HIGHWAY FUNDS—Continued

County	Expended in 1933				Expended in 1934	Grand Total Expenditures	Transferred to 1933 Allotment
	For Maintenance and Betterment	For Construction	For Surveys	Total			
Baker	$ 890.90	$ 8,855.85	$	$ 9,746.75	$	$ 29,053.87	$ .....
Benton	648.00	2,365.29	.....	3,013.29	6.00	21,880.13	.....
Clackamas	3,438.40	16,659.90	.....	20,098.30	.....	67,052.50	.....
Clatsop	.....	62.32	.....	62.32	.....	31,724.71	.....
Columbia	1,953.96	7,575.16	488.29	10,017.41	.....	21,716.42	1,193.74
Coos	6,073.24	4,804.97	.....	10,878.21	16.00	35,142.43	.....
Crook	225.81	2,589.58	.....	2,815.39	.....	6,200.92	626.00
Curry	.....	4,322.36	.....	4,322.36	16.00	6,829.93	.....
Deschutes	26.45	1,458.73	.....	1,485.18	.....	17,874.76	307.12
Douglas	740.66	23,668.91	138.01	24,547.58	1,500.00	42,304.72	.....
Gilliam	.....	1,015.63	30.00	1,045.63	.....	12,198.06	270.00
Grant	524.49	.....	.....	524.49	.....	5,622.81	4,365.40
Harney	1,329.96	3,490.15	.....	4,820.11	*601.04	11,449.40	390.25
Hood River	297.69	6,398.26	.....	6,695.95	.....	13,332.07	.....
Jackson	181.18	17,068.50	581.91	17,831.59	8.00	40,796.93	2,540.94
Jefferson	.....	910.40	97.74	1,008.14	.....	6,743 12	127.42
Josephine	882.03	Cr. 183.18	.....	698.85	.....	11,507.16	.....
Klamath	918.08	16,338.42	7,834.19	25,090.69	.....	55,113.32	.....
Lake	203.94	.....	.....	203.94	.....	14,407.32	.....
Lane	.....	2,710.91	.....	2,710.91	736.80	71,786.60	.....
Lincoln	428.28	172.64	.....	600.92	.....	12,283.23	.....
Linn	1,888.05	3,470.47	.....	5,358.52	.....	43,321.13	769.30
Malheur	2,771.88	.....	.....	2,771.88	.....	14,232.08	915.09
Marion	.....	28,743.88	.....	28,743.88	.....	72,161.48	.....
Morrow	2,256.28	.....	.....	2,256.28	.....	14,293.25	19,825.55
Multnomah	.....	78,407.98	.....	78,407.98	.....	89,455.17	.....
Polk	859.58	2,836.50	.....	3,696.08	.....	24,637.73	.....
Sherman	.....	.....	.....	.....	.....	12,415.47	.....
Tillamook	.....	15,424.58	.....	15,424.58	6,838.85	28,528.55	755.85
Umatilla	241.20	1,372.60	.....	1,613.80	.....	59,869.25	.....
Union	.....	11,451.38	.....	11,451.38	.....	27,183.68	.....
Wallowa	.....	.....	.....	.....	.....	12,669.50	.....
Wasco	1,609.01	9,759.60	562.86	11,931.47	†3,007.42	23,830.16	.....
Washington	1,586.08	3,359.78	.....	4,945.86	765.17	45,503.70	.....
Wheeler	2.13	754.23	.....	756.36	.....	5,936.94	.....
Yamhill	1,182.98	6,947.46	.....	8,130.44	9.67	29,849.70	936.84
Totals	$ 31,160.26	$ 282,813.26	$ 9,733.00	$ 323,706.52	$ 13,504.95	$1,038,908.20	$ 33,023.50

* Maintenance expense. † Includes $6.85 survey expense.

TABLE No. 13
DISPOSITION OF 1933 SECONDARY HIGHWAY FUNDS

County	1933 Allotment	1932 Balance	Total Available in 1933	Maintenance Expenditures	Survey Expenditures	Federal Project Expenditures	State Project Expenditures	Total Expenditures	Expenditures in Excess of Allotments	Unexpended Balances Transferred to 1934
Baker	$ 8,195.40	$	$ 8,195.40	$ 10,196.54	$ 130.87	$	$	$ 10,327.41	$ 2,132.01	$ .....
Benton	6,619.05	.....	6,619.05	5,484.49	.....	.....	1,812.80	7,297.29	678.24	.....
Clackamas	20,296.35	.....	20,296.35	26,520.95	1.36	.....	.....	26,522.31	6,225.96	.....
Clatsop	8,935.20	.....	8,935.20	19,981.05	616.98	.....	.....	20,598.03	11,662.83	.....
Columbia	6,622.65	1,193.74	7,816.39	8,057.31	64.81	356.90	.....	8,479.02	662.23	.....
Coos	10,452.60	.....	10,452.60	22,814.33	760.47	.....	.....	23,574.80	13,122.20	.....
Crook	2,056.50	626.00	2,682.50	3,794.67	.....	.....	.....	3,794.67	1,112.17	.....
Curry	1,713.60	.....	1,713.60	431.38	623.58	90.35	.....	1,145.31	.....	568.29
Deschutes	5,268.60	307.12	5,575.72	1,358.87	.....	.....	.....	1,358.87	.....	4,216.85
Douglas	12,922.20	.....	12,922.20	12,151.49	339.13	428.82	.....	12,919.44	.....	2.76
Gilliam	3,738.15	270.00	4,008.15	1,904.14	.....	.....	.....	1,904.14	.....	2,104.01
Grant	2,979.45	4,365.40	7,344.85	5,026.06	.....	.....	.....	5,026.06	.....	2,318.79
Harney	3,470.40	390.25	3,860.65	7,550.84	.....	.....	.....	7,550.84	3,690.19	.....
Hood River	3,946.05	.....	3,946.05	2,180.87	129.78	.....	54.92	2,365.57	.....	1,580.48
Jackson	13,210.20	2,540.94	15,751.14	9,195.28	765.74	.....	.....	9,961.02	.....	5,790.12
Jefferson	2,060.10	127.42	2,187.52	1,504.48	922.73	.....	.....	2,427.21	239.69	.....
Josephine	3,242.70	.....	3,242.70	3,968.96	675.13	.....	.....	4,644.09	1,401.39	.....
Klamath	16,889.85	.....	16,889.85	16,035.74	579.86	442.41	.....	17,058.01	168.16	.....
Lake	4,348.35	.....	4,348.35	3,793.76	.....	.....	.....	3,793.76	.....	554.59
Lane	21,501.90	.....	21,501.90	25,382.55	1,778.40	.....	.....	27,160.95	5,659.05	.....
Lincoln	3,653.10	.....	3,653.10	9,665.87	1,325.27	.....	.....	10,991.14	7,338.04	.....
Linn	13,464.45	769.30	14,233.75	21,684.94	1,243.60	221.00	29,545.23	52,694.77	38,461.02	.....
Malheur	4,469.85	915.09	5,384.94	8,932.46	91.36	958.56	.....	9,982.38	4,597.44	.....
Marion	21,998.70	.....	21,998.70	12,736.35	6,555.06	.....	.....	19,291.41	.....	2,707.29
Morrow	4,177.80	.....	4,177.80	4,884.85	2,515.08	755.00	.....	8,154.93	3,977.13	.....
Multnomah	45,000.00	19,825.55	64,825.55	872.93	254.58	.....	48,408.00	49,535.51	.....	15,290.04
Polk	7,500.60	.....	7,500.60	30,490.64	5,704.73	800.00	7,717.50	44,712.87	37,212.27	.....
Sherman	3,716.55	.....	3,716.55	3,110.97	.....	.....	.....	3,110.97	.....	605.58
Tillamook	7,982.10	.....	7,982.10	349.87	.....	.....	.....	349.87	.....	7,632.23
Umatilla	18,143.10	755.85	18,898.95	20,455.73	.....	.....	.....	20,455.73	1,556.78	.....
Union	8,042.40	.....	8,042.40	9,245.06	178.70	.....	.....	9,423.76	1,381.36	.....
Wallowa	3,736.35	.....	3,736.35	1,270.40	.....	.....	.....	1,270.40	.....	2,465.95
Wasco	6,935.40	.....	6,935.40	2,335.19	.....	.....	.....	2,335.19	.....	4,600.21
Washington	13,639.95	.....	13,639.95	25,705.22	984.67	4,000.00	.....	30,689.89	14,327.45	.....
Wheeler	1,667.25	.....	1,667.25	3,138.02	.....	.....	.....	3,138.02	1,470.77	.....
Yamhill	9,243.00	936.84	10,179.84	15,387.40	478.18	119.40	.....	15,984.98	5,805.14	.....
Totals	$331,839.90	$ 33,023.50	$364,863.40	$357,599.66	$ 26,720.07	$ 8,172.44	$ 87,538.45	$480,030.62	$162,881.52	$ 50,437.19
Multnomah county surplus	118,160.10	.....	118,160.10	.....	.....	.....	.....	.....	–118,160.10	.....
Totals	$450,000.00	$	$483,023.50	$	$	$	$	$	$*44,721.42	$ .....

* Additional state funds expended on secondary highways in 1933 in excess of county ratio allotments.

TABLE NO. 14
DISPOSITION OF 1934 SECONDARY HIGHWAY FUNDS

County	1933 Balance	1934 Allotment	Total Available in 1934	Maintenance Expenditures	Survey Expenditures	Federal Project Expenditures	State Project Expenditures	Total Expenditures	Expenditures in Excess of Allotments	Unexpended Balances Transferred to 1935
Baker	$	$ 8,385.35	$ 8,385.35	$ 10,273.35	$ .43	$	$ 125.00	$ 10,398.78	$ 2,013.43	$ .....
Benton	.....	6,899.83	6,899.83	6,285.37	1,214.83	342.95	5,888.26	13,731.41	6,831.58	.....
Clackamas	.....	21,661.46	21,661.46	47,637.34	2,862.07	500.00	.....	50,999.41	29,337.95	.....
Clatsop	.....	8,589.08	8,589.08	25,431.57	104.81	1,300.29	.....	26,836.67	18,247.59	.....
Columbia	.....	6,734.70	6,734.70	13,932.83	1,228.95	90.64	.....	15,252.42	8,517.72	.....
Coos	.....	10,682.24	10,682.24	23,152.69	1,600.43	2,577.48	.....	27,330.60	16,648.36	.....
Crook	.....	2,170.30	2,170.30	9,545.66	95.46	.....	.....	9,641.12	7,470.82	.....
Curry	568.29	1,823.67	2,391.96	626.97	617.38	1,637.09	.62	2,882.06	490.10	.....
Deschutes	4,216.85	5,302.58	9,519.43	2,242.57	.....	.....	.....	2,242.57	.....	7,276.86
Douglas	2.76	13,254.68	13,257.44	15,523.91	40.08	513.52	.....	16,077.51	2,820.07	.....
Gilliam	2,104.01	3,660.56	5,764.57	2,909.96	.....	961.81	.....	3,871.77	.....	1,892.80
Grant	2,318.79	3,023.82	5,342.61	2,274.39	.....	.....	.....	2,274.39	.....	3,068.22
Harney	.....	3,259.00	3,259.00	4,610.77	.....	.....	.....	4,610.77	1,351.77	.....
Hood River	1,580.48	4,112.08	5,692.56	6,940.07	82.02	.....	.....	7,022.09	1,329.53	.....
Jackson	5,790.12	13,078.22	18,868.34	20,079.04	13.28	.....	.64	20,092.96	1,224.62	.....
Jefferson	.....	2,156.97	2,156.97	1,437.66	296.70	1,702.04	.....	3,436.40	1,279.43	.....
Josephine	.....	3,373.55	3,373.55	7,393.23	3,063.13	666.41	.....	11,122.77	7,749.22	.....
Klamath	.....	17,291.58	17,291.58	17,751.27	659.12	754.91	.....	19,165.30	1,873.72	.....
Lake	554.59	4,480.59	5,035.18	3,493.68	.....	.....	.....	3,493.68	.....	1,541.50
Lane	.....	22,090.18	22,090.18	28,283.50	1,012.03	.....	.....	29,295.53	7,205.35	.....
Lincoln	.....	3,873.22	3,873.22	17,334.16	1,611.10	.....	.....	18,945.26	15,072.04	.....
Linn	.....	13,844.54	13,844.54	15,294.66	210.85	5,882.05	600.67	21,988.23	8,143.69	.....
Malheur	.....	4,486.79	4,486.79	21,342.28	680.62	12,235.20	.....	34,258.10	29,771.31	.....
Marion	2,707.29	23,172.27	25,879.56	30,535.02	5,148.76	35,162.68	316.76	71,163.22	45,283.66	.....
Morrow	.....	4,346.03	4,346.03	8,547.95	455.42	3.32	.....	9,006.69	4,660.66	.....
Multnomah	15,290.04	45,000.00	60,290.04	646.76	1,197.38	.....	6,342.22	32,052.54	.....	52,103.68
Polk	.....	7,933.83	7,933.83	24,912.71	2,330.46	4,099.16	1,887.34	33,229.67	25,295.84	.....
Sherman	605.58	3,782.74	4,388.32	3,715.25	.....	.....	.....	3,715.25	.....	673.07
Tillamook	7,632.23	6,760.54	14,392.77	794.96	.....	500.00	10,347.70	11,642.66	.....	2,750.11
Umatilla	.....	18,676.01	18,676.01	18,982.26	.....	.....	.....	18,982.26	306.25	.....
Union	.....	8,021.81	8,021.81	18,382.96	1,387.07	.....	.....	19,770.03	11,748.22	.....
Wallowa	2,465.95	3,843.66	6,309.61	3,900.42	3,597.50	.....	.....	7,497.92	1,188.31	.....
Wasco	4,600.21	6,969.41	11,569.62	3,986.56	357.98	.....	.....	4,344.54	.....	7,225.08
Washington	.....	13,625.73	13,625.73	49,896.24	523.02	Cr. 619.54	2.57	49,802.29	36,176.56	.....
Wheeler	.....	1,703.70	1,703.70	6,193.13	.....	.....	.....	6,193.13	4,489.43	.....
Yamhill	.....	9,728.07	9,728.07	24,325.97	2,794.97	461.39	4.58	27,586.91	17,858.84	.....
Totals	$ 50,437.19	$337,798.79	$388,235.98	$498,617.12	$ 33,185.85	$ 68,771.40	$ 25,516.36	$649,956.91	$314,386.07	$ 76,531.32
Multnomah county surplus	.....	112,201.21	112,201.21	.....	.....	.....	.....	.....	–112,201.21	.....
Totals	$	$450,000.00	$500,437.19	$	$	$	$	$	*202,184.86	$ .....

* Additional state funds expended on secondary highways in excess of county ratio allotments.

TABLE NO. 15
DISPOSITION OF 1935 SECONDARY HIGHWAY FUNDS

County	1934 Balance	1935 Allotment	Total Available in 1935	Maintenance Expenditures	Survey Expenditures	Federal Project Expenditures	Rights of Way and State Project Expenditures	Total Expenditures	Expenditures in Excess of Allotments	Unexpended Balances Transferred to 1936
Baker	$	$ 8,277.27	$ 8,277.27	$ 11,476.46	$	$	$	$ 11,476.46	$ 3,199.19	$ .....
Benton	.....	6,971.76	6,971.76	8,410.09	1,392.10	814.54	75.51	10,692.24	3,720.48	.....
Clackamas	.....	21,588.23	21,588.23	47,597.10	3,980.71	487.36	.....	52,065.17	30,476.94	.....
Clatsop	.....	8,467.57	8,467.57	17,502.12	.....	40.63	.....	17,542.75	9,075.18	.....
Columbia	.....	6,552.80	6,552.80	22,810.92	467.34	8,291.05	.....	31,569.31	25,016.51	.....
Coos	.....	10,789.89	10,789.89	27,434.63	659.85	2,534.95	1,000.00	31,629.43	20,839.54	.....
Crook	.....	2,130.78	2,130.78	5,998.35	88.32	.....	.....	6,086.67	3,955.89	.....
Curry	.....	1,854.59	1,854.59	2,297.89	.....	1,559.26	.....	3,857.15	2,002.56	.....
Deschutes	7,276.86	5,211.28	12,488.14	2,453.88	.....	.....	745.84	3,199.72	.....	9,288.42
Douglas	.....	13,301.01	13,301.01	11,958.87	.....	.....	.....	11,958.87	.....	1,342.14
Gilliam	1,892.80	3,601.62	5,494.42	6,247.72	.....	.....	.....	6,247.72	753.30	.....
Grant	3,068.22	3,049.92	6,118.14	4,207.60	444.18	.....	.....	4,651.78	.....	1,466.36
Harney	.....	3,242.62	3,242.62	10,858.87	.....	.....	.....	10,858.87	7,616.25	.....
Hood River	.....	4,136.18	4,136.18	3,851.71	368.29	492.75	.....	4,712.75	576.57	.....
Jackson	.....	13,095.81	13,095.81	11,783.22	1,499.92	2,043.96	227.55	15,554.65	2,458.84	.....
Jefferson	.....	2,163.32	2,163.32	2,059.18	1,701.59	2,127.93	112.62	6,001.32	3,838.00	.....
Josephine	.....	3,319.42	3,319.42	6,933.47	405.18	500.00	.....	7,838.65	4,519.23	.....
Klamath	.....	17,195.67	17,195.67	20,459.75	1,130.88	46,978.48	.....	68,569.11	51,373.44	.....
Lake	1,541.50	4,481.01	6,022.51	3,682.85	.....	.....	.....	3,682.85	.....	2,339.66
Lane	.....	21,479.29	21,479.29	27,803.74	314.37	1,169.67	26,458.96	55,746.74	34,267.45	.....
Lincoln	.....	3,917.51	3,917.51	10,897.63	.....	233.27	.....	11,130.90	7,213.39	.....
Linn	.....	13,865.68	13,865.68	13,587.00	94.51	465.28	.....	14,146.79	281.11	.....
Malheur	.....	4,476 83	4,476.83	26,762.89	187.34	10,858.53	.....	37,808.76	33,331.93	.....
Marion	.....	23,118.77	23,118.77	38.629.82	321.26	5,372.98	570.84	39,894.90	16,776.13	.....
Morrow	.....	4,293.00	4,293.00	8,521.31	228.54	657.12	.....	9,406 97	5,113.97	.....
Multnomah	52,103.68	45,000.00	97,103.68	1,451.19	.....	.....	*61,455.19	62,906.38	.....	34,197.30
Polk	.....	7,817.01	7,817.01	36,308.81	346.09	59,110.21	3,174.03	98,939.14	91,122.13	.....
Sherman	673.07	3,746.37	4,419.44	4,130.76	.....	.....	.....	4,130.76	.....	288.68
Tillamook	2,750.11	6,551.22	9,301.33	3,440 70	178.27	Cr. 345.15	5,093.95	8,367.77	.....	933.56
Umatilla	.....	18,788.42	18,788.42	17,918.89	.....	.....	.....	17,918.89	.....	869.53
Union	.....	7,974.02	7,974.02	21,500.17	2,043.11	2.00	18.00	23,563.28	15,589.26	.....
Wallowa	.....	3,830.94	3,830.94	3,464.75	.....	3,456.29	.....	6,921.04	3,090.10	.....
Wasco	7,225.08	7,014.74	14,239.82	3,655.84	.....	.....	.....	3,655.84	.....	10,583.98
Washington	.....	13,225.75	13,225.75	40,368.19	892.86	5,518.09	.....	46,779.14	33,553.39	.....
Wheeler	.....	1,682 96	1,682 96	8,795.98	691.46	.....	.....	9,487.44	7,804.48	.....
Yamhill	.....	9,909.50	9,909.50	15,008.41	1,507.98	8,822.09	.....	25,338.48	15,428.98	.....
Totals	$ 76,531.32	$336,122.76	$412,654.08	$505,270.76	$ 18,944.15	$161,191.29	$ 98,932.49	$784,338.69	$ 432,994.24	$ 61,309.63
Multnomah county surplus	.....	113,877.24	113,877.24	.....	.....	.....	.....	.....	—113,877.24	.....
Totals	$	$450,000.00	$526,531.32	$	$	$	$	$	$†319,117.00	$ .....

* Excluding $7,804.97 on Lombard Street project, to be paid from state funds and not from Secondary Highway Allotment.
† Additional state funds expended in excess of county ratio allotments.

TABLE No. 16

EXPENDITURES ON SECONDARY STATE HIGHWAYS
Years 1932 to 1936, Inclusive

This table gives the totals of expenditures for construction and maintenance of secondary state highways during the period from 1932, to June 30, 1936. The construction expenditures include new construction, surveys and rights of way. The maintenance expenditures include minor betterments, general maintenance and operation of drawbridges and ferries.

County	Construction Expenditures			Minor Betterments and General Maintenance
	Total Amount Expended	By State	By Federal Government	
Baker	$ 21,988.88	$ 21,988.88	$	$ 46,900.70
Benton	65,142.55	31,943.46	33,199.09	27,987.58
Clackamas	126,241.67	92,012.75	34,228.92	150,189.83
Clatsop	74,459.85	33,787.42	*40,672.43	72,155.80
Columbia	72,565.82	32,923.52	39,642.30	58,638.10
Coos	226,908.36	30,537.15	196,371.21	112,450.36
Crook	4,338.69	4,338.69	.....	28,563.22
Curry	31,781.81	11,358.21	20,423.60	4,046.91
Deschutes	17,933.71	17,933.71	.....	8,825.95
Douglas	46,951.59	31,461.78	15,489.81	61,845.25
Gilliam	30,506.05	13,159.87	17,346.18	13,955.40
Grant	460.18	460.18	.....	18,030.85
Harney	6,589.29	6,589.29	.....	30,661.30
Hood River	42,160.32	13,907.64	28,252.68	17,411.63
Jackson	88,727.91	46,050.45	42,677.46	47,357.90
Jefferson	235,488.61	28,120.76	207,367.85	6,594.38
Josephine	133,490.58	68,681.41	64,809.17	22,552.86
Klamath	514,472.21	110,640.16	403,832.05	87,772.89
Lake	20,118.15	12,718.31	7,399.84	15,199.51
Lane	262,886.41	205,841.13	57,045.28	96,991.56
Lincoln	53,088.18	14,602.28	38,485.90	43,240.03
Linn	124,824.79	38,479.83	*86,344.96	76,697.38
Malheur	178,533.97	27,505.88	151,028.09	75,507.11
Marion	326,213.26	134,438.44	191,774.82	90,684.92
Morrow	100,191.60	17,436.93	82,754.67	29,544.95
Multnomah	245,441.06	245,441.06	.....	4,776.39
Polk	335,190.83	110,790.92	224,399.91	115,012.28
Sherman	12,415.47	12,415.47	.....	13,496.22
Tillamook	58,931.35	46,823.09	12,108.26	5,180.76
Umatilla	51,806.49	51,806.49	.....	72,990.39
Union	45,373.33	45,373.33	.....	65,182.66
Wallowa	88,484.29	19,732.39	68,751.90	10,272.34
Wasco	21,966.54	14,998.54	6,968.00	13,694.41
Washington	155,538.46	44,144.37	111,394.09	157,211.95
Wheeler	3,695.97	3,695.97	.....	24,174.27
Yamhill	62,398.69	39,416.79	22,981.90	71,840.18
Undistributed expense	3,723.95	3,723.95	.....	28,481.30
Totals	$3,891,030.87	$1,685,280.50	*2,205,750.37	$1,826,119.52

* Includes Clatsop county and Linn county funds in the amounts of $9,070.98 and $23,000, respectively.

TABLE NO. 17

FOREST HIGHWAY EXPENDITURES ON STATE HIGHWAY ROUTES CLASSIFIED BY COUNTIES

Years 1917 to 1935, Inclusive

In this table are given the expenditures that have been made in connection with forest highway construction work on the state highway system. This work was supervised by the United States Bureau of Public Roads, and the amounts of Federal Government expenditure and county expenditure here shown are as reported by that bureau. The state expenditures shown are included also in the foregoing table No. 8, but the Federal Government and county expenditures are not included in that table. For a classification of these expenditures by highways see table No. 19.

County	Total Amount Expended	Cooperation in Expenditures		
		By State	By County	By Federal Government
Baker	$ 186,978.85	$ 44,995.09	$ 584.00	$ 141,399.76
Clackamas	992,409.55	425,880.22		566,529.33
Coos	231,790.61		83,000.00	148,790.61
Crook	111,143.34	39,634.17	26,875.00	44,634.17
Curry	409,688.12	116,289.11	30,000.00	263,399.01
Deschutes	289,617.75	106,546.57	5,000.00	178,071.18
Douglas	1,173,503.47	314,053.51	208,636.25	650,813.71
Grant	1,480,246.57	124,490.25	250,046.25	1,105,710.07
Harney	406,575.63		65,000.00	341,575.63
Hood River	504,948.76	252,643.94		252,304.82
Jackson	699,585.88	271,095.20	3,438.81	425,051.87
Jefferson	227,750.42	56,000.00	13,000.00	158,750.42
Josephine	504,894.27	294,433.59	17,522.99	192,937.69
Klamath	795,229.01	228,598.60	172,454.97	394,175.44
Lake	283,944.25	111,482.27		172,461.98
Lane	4,708,899.43	1,275,952.74	535,211.18	2,897,735.51
Lincoln	2,365,037.69	755,618.77	315,000.00	1,294,418.92
Linn	792,055.84		118,000.00	674,055.84
Morrow	140,057.14		75,000.00	65,057.14
Tillamook	888,147.01	272,187.67	18,624.69	597,334.65
Umatilla	628,394.38	155,287.23	145,718.32	327,388.83
Union	261,231.19			261,231.19
Wallowa	360,166.58	67,951.65	39,210.35	253,004.58
Wasco	499,950.64	169,289.06	25,000.00	305,661.58
Wheeler	554,073.50	105,060.12	29,900.00	419,113.38
Totals	$19,496,319.88	$ 5,187,489.76	$ 2,177,222.81	$12,131,607.31

TABLE NO. 18

FOREST HIGHWAY EXPENDITURES ON STATE HIGHWAY ROUTES CLASSIFIED BY HIGHWAYS

Years 1917 to 1935, Inclusive

In this table are given the expenditures that have been made in connection with forest highway construction work on the state highway system. This work was supervised by the United States Bureau of Public Roads, and the amounts of Federal Government expenditure and county expenditure here shown are as reported by that bureau. The state expenditures shown are included also in the foregoing table No. 9, but the Federal Government and county expenditures are not included in that table. For a classification of these expenditures by counties see table No. 18.

Hwy. No.	Highway	Total Amount Expended	Cooperation in Expenditures		
			By State	By County	By Federal Government
1	Pacific	$ 309,776.86	$ 182,776.86	$ 23,000.00	$ 104,000.00
4	The Dalles-California	636,486.69	178,806.28	149,592.81	308,087.60
5	John Day	621,192.20	149,485.34	162,110.76	309,596.10
9	Oregon Coast	3,023,375.77	901,563.48	400,351.89	1,721,460.40
11	Enterprise-Flora	240,204.66	67,951.65	39,210.35	133,042.66
15	McKenzie	898,606.12	429,278.06	20,000.00	449,328.06
16	Santiam	1,088,574.62	56,000.00	131,000.00	901,574.62
18	Willamette	1,353,623.20	176,000.00	37,500.00	1,140,123.20
19	Fremont	103,253.22	879.37		102,373.85
20	Klamath Falls-Lakeview	249,619.74	126,919.50		122,700.24
22	Crater Lake	682,072.50	301,060.92	26,300.97	354,710.61
25	Redwood	194,160.63	130,121.32	9,522.99	54,516.32
26	Mt. Hood	1,262,063.22	577,227.85		684,835.37
27	Alsea	925,228.81	400,818.40	165,000.00	359,410.41
28	Pendleton-John Day	932,775.37	175,287.23	202,218.32	555,269.82
32	McMinnville-Tillamook	423,641.54	149,528.51	18,624.69	255,488.34
34	Siuslaw	1,936,744.82	570,859.73	397,662.21	968,222.88
38	Oregon Caves	310,733.64	164,312.27	8,000.00	138,421.37
39	Salmon River	528,103.00			528,103.00
41	Ochoco	337,999.05	144,694.29	31,775.00	161,529.76
44	Wapinitia	735,245.73	270,585.37	25,000.00	439,660.36
48	John Day-Burns	1,058,779.04		97,019.49	961,759.55
	Secondary Highways	1,644,059.45	33,333.33	233,333.33	1,377,392.79
	Totals	$19,496,319.88	$ 5,187,489.76	$ 2,177,222.81	$12,131,607.31

TABLE NO. 19
STATISTICS PERTAINING TO FOREST HIGHWAY WORK ON STATE HIGHWAYS

The statistics here given apply to highway work in the State of Oregon performed under the supervision of the United States Bureau of Public Roads. All of the work included is upon state highways at points where these highways are in or adjacent to National Forests. The work is financed under cooperative agreements between the Federal Government, the State and the counties of the state, the federal funds being Oregon's proportionate share of funds annually appropriated by congress for forest road work.

The amounts of county and Federal Government expenditures here given, and the mileages of work performed, are as reported by the United States Bureau of Public Roads. The amounts of state expenditures are as shown by the disbursement records of the State Highway Commission.

EXPENDITURES ON FOREST HIGHWAY WORK

Year	Expenditures			
	State Funds	County Funds	Government Funds	Total
1918-1919-1920	$ 809,261.58	$ 102,271.45	$ 656,708.64	$ 1,568,241.67
1921-1922	724,970.53	67,142 21	836,765.18	1,628,877.92
1923-1924	1,092,660.31	725,942.05	1,725,176.76	3,543,779.12
1925-1926	759,762.58	231,960.04	730,225.77	1,721,948.39
1927	147,859.76	105,611.36	325,542.44	579,013.56
1928	103,084.09	54,543.79	257,246.68	414,874.56
1929	82,000.00	32,000.00	421,609.32	535,609.32
1930	696,986.98	100,000.00	410,827.97	1,207,814.95
1931	653,385.58	125,000.00	1,451,085.84	2,229,471.42
1932	34,430.75	177,869.25	510,036.92	722,336.92
1933	87,217.99	* 172,676.50	*1,715,374.09	*1,975,268.58
1934	28,416.93	.....	1,157.462.02	1,185,878 95
1935	Cr. 32,547.32	†282,206.16	†1,933,545.68	†2,183,204.52
Totals	$ 5,187,489.76	$ 2,177,222.81	$12,131,607.31	$19,496,319.88

* Includes prior expenditures on John Day-Burns Highway, which highway was taken into primary system in 1933.

† Includes prior expenditures on Secondary Highways which have been taken into the Forest Road Table during 1935.

MILEAGES OF WORK COMPLETED ON FOREST HIGHWAY PROJECTS

Year	Grading (Miles)	Grade Widening (Miles)	Rock Surfacing (Miles)	Resurfacing (Miles)	Oiled Surfacing (Miles)	Bituminous Macadam (Miles)
1918	4.30	.....	.....	.....	.....	.....
1919	62.90	.....	.....	.....	.....	.....
1920	56.10	.....	22.59	.....	.....	.....
1921	20.68	.....	38.24	.....	.....	.....
1922	15.69	.....	22.37	.....	.....	.....
1923	61.00	.....	87.92	.....	.....	.....
1924	153.37	.....	74.62	.....	.....	.....
1925	34.70	.....	83.94	.....	.....	.....
1926	52.32	.....	41.41	.....	.....	.....
1927	25.10	14.70	53.50	.....	.....	.....
1928	16.80	7.00	17.60	.....	.....	.....
1929	18.80	0.20	6.00	.....	.....	.....
1930	25.04	5.31	25.88	.....	.....	.....
1931	46.14	15.15	21.35	.....	.....	.....
1932	3.27	1.00	28.36	.....	.....	.....
1933	21.79	.....	64.34	9.97	.....	24.94
1934	32.67	4.89	81.45	10.94	53.51	49.59
1935	6.47	0.95	.....	.....	30.71	.....
Totals	657.14	49.20	669.57	20.91	84.22	74.53

TABLE No. 20

COUNTY DISBURSEMENTS FOR ROAD PURPOSES
1932 to 1935, Inclusive

County	1932	1933	1934	1935
Baker	$ 155,600.45	$ 110,122.07	$ 50,378.58	$ 52,124.59
Benton	71,801.95	86,319.91	71,621.66	61,753.78
Clackamas	486,478.48	318,784.12	251,623.43	143,994.46
Clatsop	217,001.27	143,238.92	138,692.60	120,260.39
Columbia	113,237.97	73,675.59	96,398.96	68,905.41
Coos	205,777.26	178,907.09	95,826.88	197,615.04
Crook	51,377.78	25,520.74	9,212.09	10,119.82
Curry	35,684.96	39,979.38	2,536.06	12,030.68
Deschutes	39,363.24	65,474.85	6,177.51	10,654.92
Douglas	284,190.82	233,090.82	132,484.01	127,024.59
Gilliam	62,321.33	41,517.25	31,398.73	32,142.56
Grant	48,427.87	26,671.43	22,102.57	27,597.20
Harney	46,832.73	29,753.61	32,313.94	28,405.91
Hood River	74,704.69	60,568.33	36,582.00	41,582.71
Jackson	242,805.18	179,881.54	303,321.13	108,999.38
Jefferson	13,512.51	13,177.16	8,816.59	7,250.84
Josephine	55,660.27	34,022.78	43,158.13	44,696.00
Klamath	290,824.63	191,661.74	104,149.00	84,564.20
Lake	75,373.65	37,828.28	18,697.48	27,506.31
Lane	368,930.26	296,679.41	205,170.87	195,284.96
Lincoln	122,446.62	79,083.86	55,877.87	42,192.34
Linn	349,188.22	190,843.96	279,270.07	279,703.13
Malheur	58,799.44	46,381.67	23,788.90	30,386.18
Marion	656,269.20	365,018.56	215,193.19	234,154.84
Morrow	78,343.58	66,370.46	45,628.89	63,608.82
Multnomah	1,384,873.38	1,390,002.44	1,476,012.18	590,244.56
Polk	89,383.37	69,081.56	102,702.78	54,830.19
Sherman	30,749.26	72,432.43	14,000.00	10,831.21
Tillamook	157,049.22	144,691.29	92,134.87	70,764.25
Umatilla	229,733.49	136,735.11	170,473.96	161,554.07
Union	211,867.28	168,246.16	61,531.07	60,461.99
Wallowa	80,740.80	54,935.76	35,589.07	34,236.37
Wasco	118,212.97	111,943.75	101,262.99	63,815.85
Washington	203,177.67	207,649.34	181,700.16	210,494.13
Wheeler	34,248.53	20,454.73	4,121.79	5,698.18
Yamhill	174,553.04	164,408.31	89,532.21	77,999.67
Totals	$6,919,543.37	$5,475,154.41	$4,609,482.22	$3,393,489.53

TABLE No. 21

COUNTY BOND AND WARRANT INDEBTEDNESS IN CONNECTION WITH ROADS AND BRIDGES

July 1, 1936

The information contained in this table was compiled by the State Treasurer.

County	Road Bonds Outstanding	Road Warrants Outstanding	Total Road and Bridge Debt	Sinking Fund	Net Road and Bridge Debt
Baker	$ 515,000.00	$	$ 515,000.00	$ 4,710.75	$ 510,289.25
Benton	150,000.00		150,000.00	18,315.01	131,684.99
Clackamas	989,550.00	181,472.06	1,171,022.06	182,886.85	988,135.21
Clatsop					
Columbia		7,843.22	7,843.22	1,848.08	5,995.14
Coos	626,000.00	525,371.36	1,151,371.36	56,687.43	1,094,683.93
Crook	222,500.00	8,702.56	231,202.56		231,202.56
Curry	138,400.00		138,400.00	30,772.82	107,627.18
Deschutes	85,000.00		85,000.00		85,000.00
Douglas					
Gilliam	190,000.00		190,000.00	3,914.43	186,085.57
Grant	403,000.00		403,000.00	17,737.38	385,262.62
Harney	172,000.00		172,000.00	3,343.12	168,656.88
Hood River	256,500.00		256,500.00	19,852.87	236,647.13
Jackson	301,000.00	17,294.10	318,294.10	221,779.05	96,515.05
Jefferson	43,000.00		43,000.00	3,501.55	39,498.45
Josephine					
Klamath	1,325,404.00	8,948.09	1,334,352.09	298,893.59	1,035,458.50
Lake	34,000.00	373.94	34,373.94	5,739.03	28,634.91
Lane	805,700.00		805,700.00		805,700.00
Lincoln	37,600.00	51,817.05	89,417.05	—11,613.79	101,030.84
Linn					
Malheur	85,000.00		85,000.00	10,556.60	74,443.40
Marion					
Morrow	461,500.00		461,500.00	12,150.00	449,350.00
Multnomah	13,355,000.00		13,355,000.00	339,652.11	13,015,347.89
Polk		23,198.62	23,198.62	5,431.58	17,767.04
Sherman	162,000.00		162,000.00	47,302.65	114,697.35
Tillamook	111,400.00	12,382.38	123,782.38	11,262.57	112,519.81
Umatilla		22,576.79	22,576.79		22,576.79
Union	126,000.00	44,487.28	170,487.28	40,846.47	129,640.81
Wallowa	80,000.00	48,500.00	128,500.00	28,992.46	99,507.54
Wasco	286,000.00		286,000.00	25,000.00	261,000.00
Washington		103,434.98	103,434.98		103,434.98
Wheeler	189,500.00	4,551.28	194,051.28	15,542.70	178,508.58
Yamhill	214,000.00		214,000.00	14,000.00	200,000.00
Totals	$21,365,054.00	$ 1,060,953.71	$22,426,007.71	$ 1,409,105.31	$21,016,902.40

TABLE NO. 22

APPORTIONMENT TO COUNTIES OF MOTOR VEHICLE FEES

1920 to 1936

Statement of the total amounts apportioned to the several counties of motor vehicle license fees and motor transportation fees prior to July 1, 1933, and the yearly amounts apportioned under Chapter 428, Oregon Laws 1933, beginning with the calendar year 1933. Prior to 1917, the total net revenues from motor vehicle license fees were reverted to the counties, from 1917 to 1919, inclusive, the entire net fees were reverted to the state highway fund, from 1920 to January 1, 1930, inclusive, one-quarter of the net fees were apportioned to the counties and three-quarters to the state highway fund, and from January 1, 1930, to June 30, 1933, one-third of the net fees were apportioned to the counties and two-thirds to the state highway fund. The net revenues from motor transportation fees, from the beginning of the act authorizing the collection of such fees in 1927, to June 30, 1933, were apportioned one-quarter to the counties and three-quarters to the state highway fund. Subsequent to June 30, 1933, the entire net revenues from both of these sources have been deposited into the state highway fund and the counties have received a yearly distribution of $1,600,000 beginning with the calendar year 1933.

County	Motor Vehicle License Fees 1920 to June 30, 1933	Motor Transport Fees 1927 to June 30, 1933	Yearly Apportionment, 1933 to 1936		
			July Payment	December Payment	Percentage
Baker	$ 271,754.78	$ 6,663.10	$ 11,704.75	$ 11,704.75	1.463,094
Benton	331,147.52	7,987.50	14,730.25	14,730.26	1.841,282
Clackamas	781,725.30	17,959.23	34,851.17	34,851.16	4.356,396
Clatsop	381,029.53	8,228.79	15,909.55	15,909.56	1.988,694
Columbia	287,812.38	7,134.75	13,176.41	13,176.41	1.647,051
Coos	493,068.89	11,845.18	21,716.47	21,716.46	2.714,558
Crook	61,877.70	1,479.01	2,404.51	2,404.51	.300,564
Curry	55,264.62	1,387.94	2,704.27	2,704.27	.338,034
Deschutes	292,763.81	7,227.86	12,237.69	12,237.70	1.529,712
Douglas	418,357.19	9,973.09	17,756.80	17,756.80	2.219,600
Gilliam	76,368.30	1,672.68	2,675.52	2,675.52	.334,440
Grant	82,504.63	2,387.80	4,349.74	4,349.73	.543,717
Harney	75,715.98	2,497.05	4,314.37	4,314.38	.539,297
Hood River	214,944.28	4,855.61	8,962.38	8,962.37	1.120,297
Jackson	670,552.49	16,941.41	31,617.12	31,617.12	3.952,140
Jefferson	40,510.97	928.18	1,543.54	1,543 55	.192,943
Josephine	215,424.40	5,742.57	10,098.79	10,098.79	1.262,349
Klamath	533,146.70	16,532.94	28,879.77	28,879.76	3.609,971
Lake	87,509.63	2,510.80	4,402.50	4,402.50	.550,312
Lane	949,858.11	23,323.29	42,524.49	42,524.48	5.315,561
Lincoln	119,949.78	3,513.73	6,282.36	6,282.36	.785,295
Linn	480,864.10	10,543.08	20,086.10	20,086.10	2.510,762
Malheur	159,267.93	4,852.82	8,455.31	8,455.31	1.056,914
Marion	1,164,524.17	26,736.54	51,697.33	51,697.34	6.462,167
Morrow	95,094.79	2,171.69	3,689.83	3,689.82	.461,228
Multnomah	6,838,588.80	159,298.75	301,781.44	301,781.44	37.722,680
Polk	285,457.90	6,519.86	12,453.24	12,453.25	1.556,656
Sherman	85,064.85	1,539.46	2,540.16	2,540.16	.317,520
Tillamook	234,090.63	5,476.32	10,086.81	10,086.81	1.260,851
Umatilla	541,729.19	11,874.48	22,038.68	22,038.68	2.754,835
Union	307,007.47	7,487.59	13,869.50	13,869.49	1.733,687
Wallowa	114,583.55	2,664.43	4,238.21	4,238.21	.529,776
Wasco	271,209.65	6,052.11	11,331.72	11,331.72	1.416,465
Washington	567,299.56	12,856.13	24,425.99	24,426.00	3.053,249
Wheeler	41,761.62	1,162.79	1,961.37	1,961.37	.245,171
Yamhill	426,137.42	9,784.23	18,501.86	18,501.86	2.312,732
Totals	$18,053,968.62	$429,812.79	$800,000.00	$800,000.00	100.000,000

TABLE NO. 23

MILEAGES OF PRIMARY STATE HIGHWAYS

The mileages given in this table are inclusive of mileages within cities and towns

Hwy. No.	Highway	Total Mileage of Highway	Miles of Different Types of Improvement						
			Concrete Pavement	Bituminous Pavement	Bituminous Macadam	Oiled Surfacing	Unoiled Surfacing	Graded	Unimproved
1	Pacific	351.2	87.2	253.9	10.1				
2	Columbia River	317.6	22.5	172.6	59.2	63.3			
3	West Side Pacific	110.1	53.2	37.8	19.1				
4	The Dalles-California	316.7	6.6	5.7	27.1	277.3			
5	John Day	296.0			12.4	123.2	160.4		
6	Old Oregon Trail	246.4	2.1	7.2	123.4	113.7			
7	Central Oregon	246.7	0.1	0.7	18.7	45.8	36.8	123.6	21.0
8	Oregon-Washington	144.6		22.1	16.2	76.0	30.3		
9	Oregon Coast	*415.0	31.9	30.9	124.2	217.1		3.4	7.5
10	Wallowa Lake	73.0	0.2	2.9	13.4	51.7	4.8		
11	Enterprise-Lewiston	45.7					36.2		9.5
12	Baker-Homestead	93.7		0.3		1.0	38.4	29.5	24.5
13	Baker-Unity	46.2		0.4			24.7	21.1	
14	Crooked River	42.5						42.5	
15	McKenzie	111.6	0.3	0.6	33.1	48.6	29.0		
16	Santiam	101.3		0.9	31.5	13.3	19.8	28.1	7.7
17	McKenzie-Bend	17.4				17.4			
18	Willamette	87.2				20.1	31.4	29.4	6.3
19	Fremont	158.5			25.4	44.4	59.0	29.7	
20	Klamath Falls-Lakeview	92.1	0.1		42.2	5.5	44.3		
21	Green Springs	56.3		1.0	35.8	19.5			
22	Crater Lake	92.8		0.7	56.4	35.7			
23	Dairy-Bonanza	6.7					6.7		
24	Burns-Crane	28.9		0.1			28.8		
25	Redwood	42.3			10.8	31.5			
26	Mt. Hood	104.2	11.4	14.9	34.8	43.1			
27	Alsea	59.1			3.2	35.3	20.6		
28	Pendleton-John Day	98.4			6.6	29.6	55.5		6.7
29	Tualatin Valley	46.5	22.3	24.2					
30	Salem-Dallas	14.9		9.1	5.8				
31	Albany-Corvallis	10.5	10.1	0.4					
32	McMinnville-Tillamook	48.7	4.0	9.0	11.0	24.7			
33	Corvallis-Newport	57.1	0.6	0.4	27.2	28.9			
34	Siuslaw	67.3			16.0	35.0	16.3		
35	Coos Bay-Roseburg	61.8	0.1	0.3	9.0	52.4			
36	Pendleton-Cold Springs	30.5			5.2	24.8	0.5		
37	Wilson River	54.3	1.7	0.5		2.0		11.8	38.3
38	Oregon Caves	19.1				19.1			
39	Salmon River	21.9			8.4	13.5			
40	Bertha-Beaverton	5.9	3.5	2.4					
41	Ochoco	104.7				56.9	47.8		
42	Sherman	68.9			15.9	32.4	20.6		
43	Monmouth-Independence	2.6		2.6					
44	Wapinitia	40.0			23.0	17.0			
45	Umpqua	50.1	0.4		33.5	7.9	8.3		
46	East Portland-Oregon City	12.0	10.0	2.0					
47	Wolf Creek	62.3					11.4	4.9	46.0
48	John Day-Burns	67.1			18.7		48.4		
49	Lakeview-Burns	90.1				90.1			
	Totals	4,738.5	268.3	603.6	877.3	1,717.8	780.0	324.0	167.5

* Includes 20.96 miles in Cannon Beach route.

TABLE No. 24

MILEAGES OF PRIMARY STATE HIGHWAYS BY COUNTIES

The mileages given in this table are inclusive of mileages within cities and towns.

County	Total Mileage in County	Miles of Different Types of Improvement						
		Concrete Pavement	Bituminous Pavement	Bituminous Macadam	Oiled Surfacing	Unoiled Surfacing	Graded	Unimproved
Baker	234.9	1.0	1.6	38.5	32.7	86.1	50.5	24.5
Benton	93.3	18.8	10.2	23.3	41.0	.....	.....	.....
Clackamas	74.0	31.2	2.0	37.9	2.9	.....	.....	.....
Clatsop	110.0	16.1	34.9	17.8	16.6	11.3	5.8	7.5
Columbia	56.2	1.9	53.5	.....	.....	.....	.....	0.8
Coos	102.5	21.6	2.3	25.6	53.0	.....	.....	.....
Crook	83.4	.....	.....	.....	21.3	23.7	38.4	.....
Curry	90.1	0.4	.....	11.1	78.6	.....	.....	.....
Deschutes	203.1	0.8	3.1	27.8	100.6	30.6	40.2	.....
Douglas	200.5	22.5	77.7	35.1	57.0	8.2	.....	.....
Gilliam	97.5	.....	.....	1.4	96.1	.....	.....	.....
Grant	200.0	.....	.....	10.2	42.5	140.6	.....	6.7
Harney	185.5	.....	0.5	13.9	56.9	59.6	33.6	21.0
Hood River	69.2	0.5	25.8	2.7	40.2	.....	.....	.....
Jackson	148.2	6.5	53.7	63.4	24.6	.....	.....	.....
Jefferson	50.2	.....	.....	4.8	39.7	.....	5.7	.....
Josephine	96.3	2.1	32.8	10.8	50.6	.....	.....	.....
Klamath	306.7	5.9	3.8	89.3	147.8	21.5	38.4	.....
Lake	246.1	.....	.....	25.4	103.6	91.1	26.0	.....
Lane	286.8	20.2	30.8	51.6	104.5	68.4	5.0	6.3
Lincoln	138.1	1.2	.....	60.7	55.6	20.6	.....	.....
Linn	118.0	10.0	17.5	27.3	13.2	19.9	22.5	7.6
Malheur	182.5	1.1	1.7	35.4	81.4	19.3	43.6	.....
Marion	43.2	11.0	32.2	.....	.....	.....	.....	.....
Morrow	93.4	.....	.....	3.1	70.4	19.9	.....	.....
Multnomah	116.1	22.8	92.5	0.8	.....	.....	.....	.....
Polk	58.2	14.7	18.5	23.8	1.2	.....	.....	.....
Sherman	63.9	0.1	.....	30.6	32.0	1.2	.....	.....
Tillamook	133.0	7.1	11.0	36.6	38.2	.....	14.3	25.8
Umatilla	240.9	.....	24.1	79.4	104.9	32.5	.....	.....
Union	85.4	0.3	4.6	38.9	41.4	0.2	.....	.....
Wallowa	84.3	.....	1.0	7.7	25.4	40.7	.....	9.5
Wasco	165.3	0.1	19.2	37.9	88.6	19.5	.....	.....
Washington	100.0	12.1	30.1	.....	.....	.....	.....	57.8
Wheeler	107.8	.....	.....	.....	42.7	65.1	.....	.....
Yamhill	73.9	38.3	18.5	4.5	12.6	.....	.....	.....
Totals	4,738.5	2,683.0	603.6	877.3	1,717.8	780.0	324.0	167.5

TABLE NO. 25

MILEAGES OF SECONDARY STATE HIGHWAYS BY COUNTIES

The mileages given in this table are inclusive of mileages within cities and towns.

County	Total Mileage in County	Miles of Different Types of Improvement					
		Concrete Paving	Bituminous Paving	Oiled Surfacing	Rock or Gravel Surfacing	Graded	Unimproved
Baker	81.1				55.1		26.0
Benton	32.1			.2	31.9		
Clackamas	81.4	3.2	15.6	42.3	18.9		1.4
Clatsop	37.9	15.2	1.7	2.0	19.0		
Columbia	42.6	1.0	.3	17.8	23.5		
Coos	55.7	1.0	.7	5.6	47.2	1.2	
Crook	80.5				59.6	19.9	1.0
Curry	6.3				4.8	1.5	
Deschutes	38.4				2.5	35.9	
Douglas	91.7			24.7	67.0		
Gilliam	49.7			.4	15.1	12.0	22.2
Grant	19.7				5.3	5.0	9.4
Harney	96.3				19.8	22.3	54.2
Hood River	18.5	2.5		4.3	11.7		
Jackson	82.0		8.3	31.0	35.0		7.7
Jefferson	41.3				15.0	20.6	5.7
Josephine	44.1			14.2	25.4	4.5	
Klamath	90.0			35.6	19.4	7.0	28.0
Lake	46.8				19.2	27.6	
Lane	142.7	.7	12.8	5.1	103.3		20.8
Lincoln	44.6				44.6		
Linn	56.0			14.9	41.1		
Malheur	126.9			12.3	7.0	40.7	66.9
Marion	120.5	1.1	66.1	29.8	19.5		4.0
Morrow	68.4				41.9	20.0	6.5
Multnomah	4.2	3.3	.8	.1			
Polk	57.9	.2	3.1	33.9	20.7		
Sherman	40.1				24.5	15.6	
Tillamook	8.5				4.0	4.5	
Umatilla	89.7			27.1	61.2		1.4
Union	80.9			6.1	38.4	29.4	7.0
Wallowa	31.2				7.8	22.8	.6
Wasco	32.1				22.8	3.9	5.4
Washington	66.5	.4	2.3	40.9	22.9		
Wheeler	61.6				34.7	12.7	14.2
Yamhill	62.7	7.9	3.5	3.7	47.6		
Totals	2,130.6	36.5	115.2	352.0	1,037.4	307.1	282.4

TABLE No. 26

MILEAGES OF COUNTY ROADS

The mileages given here include all market road and county road mileages. They do not include mileages of primary or secondary state highways. The mileages of pavement and oiled macadam surface may be considered reasonably correct, but the mileages of other types of improvement, and the total mileages are not represented to be more than roughly approximate.

County	Total Mileage of County Roads	Paved With Bituminous Pavement	Paved With Concrete Pavement	Oiled Rock or Gravel Surfacing	Unoiled Rock or Gravel Surfacing	Improved Earth Roads	Unimproved Earth Roads
Baker	1,000.0	.....	.....	.....	148.8	75.0	776.2
Benton	490.0	.....	.....	.....	392.0	4.0	94.0
Clackamas	1,518.0	100.4	76.0	141.0	631.0	78.0	491.6
Clatsop	212.7	1.5	18.8	.....	161.2	8.0	23.2
Columbia	902.2	2.4	3.4	13.4	334.0	90.0	459.0
Coos	619.5	.....	.....	2.8	373.9	150.4	92.4
Crook	1,145.0	.....	.....	.....	98.0	194.0	853.0
Curry	162.5	.....	.....	.....	160.0	2.5	.....
Deschutes	1,845.0	0.1	.....	.....	14.0	195.0	1,635.9
Douglas	960.0	0.4	6.3	17.0	900.0	.....	36.3
Gilliam	655.0	.....	.....	.....	73.0	112.0	470.0
Grant	792.0	.....	.....	.....	55.0	7.0	730.0
Harney	2,460.0	.....	.....	.....	116.0	302.0	2,042.0
Hood River	198.0	.....	2.0	.....	81.0	69.0	46.0
Jackson	1,011.5	1.0	3.5	30.0	467.0	310.0	200.0
Jefferson	1,900.0	.....	.....	.....	46.0	80.0	1,774.0
Josephine	445.0	.....	.....	0.5	86.0	279.0	79.5
Klamath	2,284.0	.....	.....	6.0	277.0	151.0	1,850.0
Lake	1,820.0	.....	.....	.....	60.0	240.0	1,520.0
Lane	1,388.8	11.9	.....	131.6	790.6	111.0	343.7
Lincoln	650.0	.....	.....	.....	203.0	55.0	392.0
Linn	1,458.0	.....	.....	23.0	1,135.0	20.0	280.0
Malheur	1,721.0	.....	.....	.....	161.0	680.0	880.0
Marion	1,495.0	186.5	.....	52.0	804.0	349.0	103.5
Morrow	1,192.0	.....	.....	.....	148.0	45.0	999.0
Multnomah	564.9	37.8	25.2	401.8	.....	16.6	83.5
Polk	619.7	.....	.....	15.7	454.0	100.0	50.0
Sherman	553.5	.....	.....	.....	114.5	226.0	213.0
Tillamook	230.9	.....	2.7	3.4	189.1	.....	35.7
Umatilla	3,780.0	.....	.....	15.0	315.0	575.0	2,875.0
Union	1,420.0	.....	.....	.....	302.0	524.0	594.0
Wallowa	1,270.5	.....	.....	.....	140.0	65.0	1,065.5
Wasco	1,540.8	5.0	.....	18.0	237.1	763.7	517.0
Washington	1,010.0	2.7	.....	69.0	814.0	79.3	45.0
Wheeler	524.0	.....	.....	.....	44.0	48.0	432.0
Yamhill	1,315.0	.....	.....	40.0	498.1	550.0	226.9
Totals	41,154.5	349.7	137.9	980.2	10,823.3	6,554.5	22,308.9

TABLE NO. 27

MILEAGES OF SECONDARY STATE HIGHWAYS

The mileages given in this table are inclusive of mileages within cities and towns.

County	Hwy. No.	Name	Length in Each County	Total in County
Baker	340	Medical Springs	19.90	
	410	Sumpter Valley	22.60	
	411	Haines-Anthony	12.60	
	412	Robinette-Homestead	26.00	81.10
Benton	180	Eddyville-Blodgett	6.47	
	190	Kings Valley	10.00	
	200	Territorial	2.05	
	201	Alsea-Deadwood	7.80	
	202	Tampico-Lewisville	5.61	
	210	Corvallis-Eastside	0.17	32.10
Clackamas	141	Beaverton-Aurora	5.55	
	160	Cascade	31.85	
	161	Woodburn-Mt. Hood Loop	44.00	81.40
Clatsop	102	Nehalem	37.85	37.85
Columbia	102	Nehalem	30.67	
	110	Mist-Clatskanie	11.95	42.62
Coos	240	Cape Arago	14.42	
	241	Coos River	18.93	
	242	Powers	18.70	
	243	Empire-Marshfield	3.60	55.65
Crook	360	Warm Springs	10.08	
	370	O'Neil	14.28	
	371	Powell Butte	7.74	
	380	Crooked River-Paulina	48.40	80.50
Curry	250	Cape Blanco	5.80	
	251	Port Orford	0.50	6.30
Deschutes	370	O'Neil	3.72	
	371	Powell Butte	10.46	
	372	Century Drive	10.21	
	373	Cline Falls	10.13	
	374	Tumalo-Deschutes	3.90	38.42
Douglas	230	Tiller-Trail	39.20	
	231	Elkton-Sutherlin	27.80	
	232	Crater Lake-North	5.30	
	233	West Diamond Lake	17.90	
	425	East Diamond Lake	1.51	91.71
Gilliam	300	Wasco-Heppner	49.74	49.74
Grant	401	Beech Creek	5.35	
	402	Monument	14.36	19.71

TABLE NO. 27

MILEAGES OF SECONDARY STATE HIGHWAYS

The mileages given in this table are inclusive of mileages within cities and towns.

County	Hwy. No.	Name	Length in Each County	Total in County
Baker	340	Medical Springs	19.90	
	410	Sumpter Valley	22.60	
	411	Haines-Anthony	12.60	
	412	Robinette-Homestead	26.00	81.10
Benton	180	Eddyville-Blodgett	6.47	
	190	Kings Valley	10.00	
	200	Territorial	2.05	
	201	Alsea-Deadwood	7.80	
	202	Tampico-Lewisville	5.61	
	210	Corvallis-Eastside	0.17	32.10
Clackamas	141	Beaverton-Aurora	5.55	
	160	Cascade	31.85	
	161	Woodburn-Mt. Hood Loop	44.00	81.40
Clatsop	102	Nehalem	37.85	37.85
Columbia	102	Nehalem	30.67	
	110	Mist-Clatskanie	11.95	42.62
Coos	240	Cape Arago	14.42	
	241	Coos River	18.93	
	242	Powers	18.70	
	243	Empire-Marshfield	3.60	55.65
Crook	360	Warm Springs	10.08	
	370	O'Neil	14.28	
	371	Powell Butte	7.74	
	380	Crooked River-Paulina	48.40	80.50
Curry	250	Cape Blanco	5.80	
	251	Port Orford	0.50	6.30
Deschutes	370	O'Neil	3.72	
	371	Powell Butte	10.46	
	372	Century Drive	10.21	
	373	Cline Falls	10.13	
	374	Tumalo-Deschutes	3.90	38.42
Douglas	230	Tiller-Trail	39.20	
	231	Elkton-Sutherlin	27.80	
	232	Crater Lake-North	5.30	
	233	West Diamond Lake	17.90	
	425	East Diamond Lake	1.51	91.71
Gilliam	300	Wasco-Heppner	49.74	49.74
Grant	401	Beech Creek	5.35	
	402	Monument	14.36	19.71

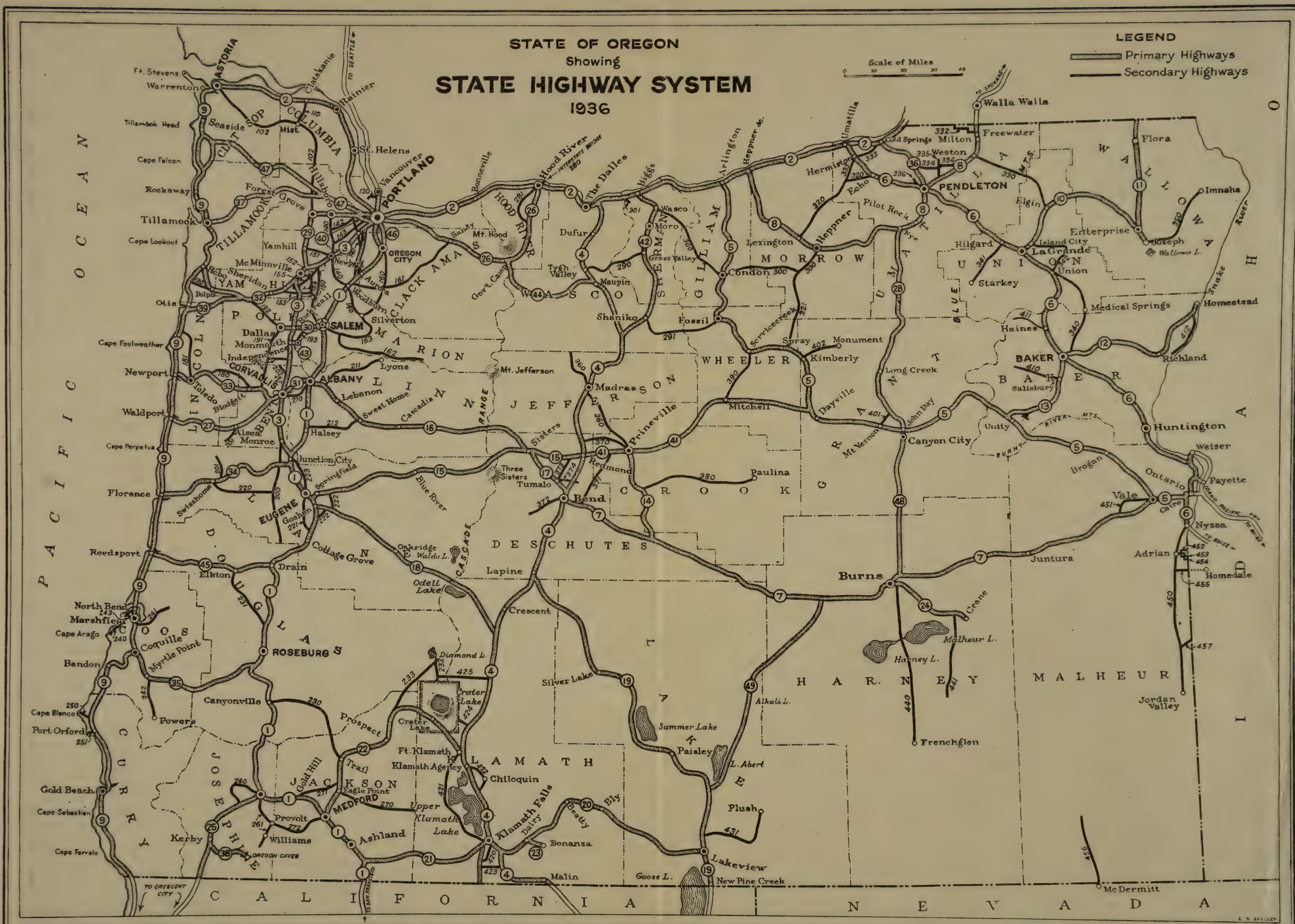

STATE OF OREGON
Showing
STATE HIGHWAY SYSTEM
1936
LEGEND
Primary Highways
Secondary Highways
Scale of Miles
PACIFIC OCEAN
CALIFORNIA
NEVADA
IDAHO
Ft. Stevens
Warrenton
Astoria
Seaside
Tillamook Head
Cape Falcon
Rockaway
Tillamook
Cape Lookout
Otis
Cape Foulweather
Newport
Waldport
Cape Perpetua
Florence
Reedsport
North Bend
Marshfield
Cape Arago
Coquille
Myrtle Point
Bandon
Cape Blanco
Port Orford
Gold Beach
Cape Sebastian
Cape Ferrelo
Clatskanie
Rainier
St. Helens
Mist
Forest Grove
Hillsboro
Vancouver
PORTLAND
Oregon City
McMinnville
Sheridan
Yamhill
Newberg
Dallas
Monmouth
Independence
SALEM
Silverton
Woodburn
Aurora
Corvallis
Albany
Lebanon
Sweet Home
Cascadia
Lyons
Toledo
Alsea
Monroe
Halsey
Junction City
EUGENE
Springfield
Goshen
Cottage Grove
Drain
Elkton
Swisshome
ROSEBURG
Canyonville
Powers
Prospect
Trail
Gold Hill
Eagle Point
MEDFORD
Ashland
Provolt
Williams
Kerby
Oregon Caves
Bonneville
Hood River
The Dalles
Mt. Hood
Sandy
Dufur
Tygh Valley
Maupin
Shaniko
Wasco
Moro
Biggs
Grass Valley
Condon
Fossil
Arlington
Heppner
Lexington
Umatilla
Hermiston
Echo
Pilot Rock
PENDLETON
Walla Walla
Freewater
Milton
Weston
Cold Springs
Elgin
Enterprise
Joseph
Wallowa L.
Flora
Imnaha
LaGrande
Island City
Union
Hilgard
Starkey
Medical Springs
Haines
BAKER
Richland
Homestead
Huntington
Salisbury
Unity
Weiser
Payette
Ontario
Vale
Nyssa
Adrian
Homedale
Jordan Valley
Brogan
Juntura
Spray
Monument
Kimberly
Long Creek
Dayville
Mitchell
John Day
Mt. Vernon
Canyon City
Prineville
Madras
Mt. Jefferson
Sisters
Redmond
Three Sisters
Tumalo
Bend
Paulina
Lapine
Crescent
Oakridge
Waldo L.
Odell Lake
Diamond L.
Crater Lake
Ft. Klamath
Klamath Agency
Chiloquin
Upper Klamath Lake
Klamath Falls
Dairy
Beatty
Ely
Bonanza
Malin
Silver Lake
Summer Lake
Paisley
L. Abert
Plush
Lakeview
Goose L.
New Pine Creek
Burns
Crane
Malheur L.
Harney L.
Frenchglen
Alkali L.
McDermitt
Clatsop
Columbia
Tillamook
Yamhill
Polk
Lincoln
Benton
Marion
Linn
Clackamas
Hood River
Wasco
Sherman
Gilliam
Morrow
Umatilla
Union
Wallowa
Baker
Grant
Wheeler
Jefferson
Crook
Deschutes
Lane
Douglas
Coos
Curry
Josephine
Jackson
Klamath
Lake
Harney
Malheur
Cascade Range
Blue Mts.
Burnt River Mts.
Snake River

TABLE No. 27—Continued

County	Hwy. No.	Name	Length in Each County	Total in County
Harney	440	Frenchglen	62.00	
	441	Diamond Valley	34.30	96.30
Hood River	280	Interstate Bridge	0.50	
	281	Hood River	18.05	18.55
Jackson	230	Tiller-Trail	12.70	
	233	West Diamond Lake	6.01	
	270	Little Butte	22.00	
	271	Sam's Valley	17.00	
	272	Medford-Provolt	24.31	82.02
Jefferson	360	Warm Springs	41.25	41.25
Josephine	260	Rogue River Loop	21.41	
	261	Williams	22.70	44.11
Klamath	420	Midland	5.65	
	421	Klamath Lake	50.06	
	422	Chiloquin	9.65	
	423	Lower Klamath	7.00	
	424	Sand Creek	4.20	
	425	East Diamond Lake	13.40	89.96
Lake	431	Warner	46.81	46.81
Lane	200	Territorial	39.05	
	201	Alsea-Deadwood	22.50	
	220	Eugene-Swisshome	36.75	
	221	Fox Hollow	15.50	
	222	Springfield-Cottage Grove	15.41	
	223	Junction City-Eugene	13.52	142.73
Lincoln	180	Eddyville-Blodgett	12.45	
	181	Siletz	32.10	44.55
Linn	210	Corvallis-Eastside	9.83	
	211	Albany-Lyons	24.75	
	212	Halsey-Sweet Home	21.45	56.03
Malheur	450	Jordan Valley	75.60	
	451	Vale-West	10.67	
	452	Adrain-Parma	2.70	
	453	Adrain-Arena Valley	3.22	
	454	Adrain-Caldwell	4.40	
	455	Homedale Spur	1.95	
	456	McDermitt-North	26.00	
	457	Malloy Ranch-Idaho Line	2.40	126.94
Marion	140	Hillsboro-Woodburn	30.51	
	141	Beaverton-Aurora	2.20	
	160	Cascade	6.45	
	161	Woodburn-Mt. Hood Loop	2.60	
	162	North Santiam	34.38	
	163	Silver Creek Falls	40.35	
	164	Butteville Road-Hubbard	4.00	120.49

TABLE No. 27—Continued

County	Hwy. No.	Name	Length in Each County	Total in County
Morrow	300	Wasco-Heppner	23.83	
	320	Lexington-Echo	19.98	
	321	Heppner-Spray	24.59	68.40
Multnomah	120	Swift	2.98	
	121	Lombard Street	0.71	
	122	Vancouver Avenue	0.56	4.25
Polk	150	Salem-Dayton	9.75	
	190	Kings Valley	15.45	
	191	Dallas-Kings Valley	10.65	
	192	Dallas-Coast	15.55	
	193	Independence	6.45	57.85
Sherman	290	Sherars Bridge	20.00	
	300	Wasco-Heppner	18.55	
	301	Fulton Canyon-Wasco	1.50	40.05
Tillamook	130	Little Nestucca	8.50	8.50
Umatilla	320	Lexington-Echo	15.84	
	330	Weston-Elgin	22.74	
	332	Sunnyside-Umapine	7.30	
	333	Hermiston	17.43	
	334	Athena-Cold Springs	16.48	
	335	Havana-Helix	9.00	
	336	Airport	0.95	89.74
Union	330	Weston-Elgin	19.45	
	340	Medical Springs	22.45	
	341	Starkey	17.00	
	342	Cove	22.04	80.94
Wallowa	350	Little Sheep Creek	31.16	31.16
Wasco	290	Sherars Bridge	8.85	
	291	Shaniko-Fossil	23.20	32.05
Washington	102	Nehalem	15.87	
	140	Hillsboro-Woodburn	15.05	
	141	Beaverton-Aurora	12.95	
	142	Farmington	10.00	
	143	Scholls	12.60	66.47
Wheeler	291	Shaniko-Fossil	20.35	
	321	Heppner-Spray	16.42	
	390	Service Creek-Mitchell	24.85	61.62
Yamhill	140	Hillsboro-Woodburn	6.53	
	150	Salem-Dayton	10.85	
	151	Yamhill-Newberg	10.58	
	152	Three Mile Lane	7.86	
	153	Bellevue-Hopewell	14.43	
	154	Lafayette	5.70	
	155	Amity-Dayton	6.74	62.69
		Total		2,130.56

LIST OF EMPLOYES OF STATE HIGHWAY COMMISSION

The following is a list of the employes of the State Highway Commission as of June 30, 1936, together with the amounts of compensation and expense allowance paid to each during the two-year period from July 1, 1934, to June 30, 1936.

Name and Title	Amount Received	
	Salary	Expense Allowance
Abbott, Charles B., office assistant	$ 145.16	$ .....
Abbott, C. L., laborer	323.30	.....
Abbott, George, laborer	30 25	.....
Abbott, Julian R., working foreman	2,868.33	.....
Abst, Ray, weight party chief	241.71	23.60
Ackerson, Duane, axeman	42.00	.....
Ackley, Wayne C., truck driver	1,975.60	.....
Adams, Alveron A., grader operator	777.00	.....
Adams, B. F., stockman	2,651.57	.....
Adams, Cleve, axeman	310.65	.....
Adams, Hugh, photostat operator	2,944.40	.....
Adams, J. Glen, section helper	2,026.80	.....
Adams, W. G., clerk	2,576.82	.....
Addington, F. H., office assistant	164.52	.....
Addington, M. M., section foreman	2,400.10	.....
Adlard, I. R., clerk	716.00	.....
Adlard, John, laboratory assistant	915.11	6.30
Agee, J. H., raker	125.37	.....
Ahalt, H. K., watchman	1,093.41	.....
Aiken, Chas. G., laborer	1,827.83	.....
Akerly, L. L., laborer	334.60	.....
Akins, Wm., laborer	126.90	.....
Aldrich, E. B., commissioner	.....	315.20
Aldrich, E. B., commissioner	.....	*136.60
Alery, Marie, stenographer	1,491.43	.....
Alford, Ivan C., truck driver	60.88	.....
Allen, B. F., section foreman	1,730.40	.....
Allen, M. W., draftsman	3,573.31	.....
Alling, Geo. W., clerk	1,456.55	.....
Allstott, C., mechanic	2,409.70	192.00
Alman, H. L., parkkeeper	308.61	.....
Alsdorf, Chas., section helper	1,590.35	3.65
Alvick, Roy, office assistant	3,210.93	4.65
Ammons, Carl, tractor operator	61.95	.....
Ammons, Virgil, blademan	65.45	.....
Amort, Peggy, clerk	1,823.67	.....
Anderson, Arthur A., computor	2,646.06	12.15
Anderson, A. S., laborer	1,147.48	.....
Anderson, A. W., laboratorian	66.67	.....
Anderson, C. E., watchman	1,322.97	.....
Anderson, Geo. W., clerk	3,190.21	1.90
Anderson, Gilbert D., carpenter	2,109.17	.....
Anderson, Harold C., timekeeper	127.01	.45
Anderson, James A., tractor operator	1,851.76	.....
Anderson, Lillian, stenographer	1,840.00	.....
Anderson, Lynn A., laborer	545.73	.....
Anderson, M. H., raker	2,134.34	.....
Anderson, Norman, helper	1,351.29	.....
Anderson, Richard D., transit-rodman	1,323.82	6.00
Anderson, Robt. C., laborer	290.70	.....
Anderson, Roy, truck driver	1,056.35	.....
Andrews, Linn, truck driver	1,739.34	.....
Andrews, Robert E., chainman	919.87	6.90
Angstead, Chas., truck driver	1,990.40	.....
Ansell, Lewis, laborer	25.00	.....
Anstine, L. V., laborer	58.50	.....

* Private car mileage.

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Amundson, H. M., computer	$3,204.36	$
Aplin, A. L., inspector	786 67	4.85
Apperson, Robert C., inspector	656.16	
Applegate, Paul, chainman	939.75	
Applegate, R. F., carpenter	2,342.76	
Archibald, A. E., sign foreman	3,190.21	1,125.85
Argo, C. E., working foreman	11.25	
Armitage, B. W., party man	121.94	95.80
Armstrong, C. B. boilerman	258.68	
Armstrong, C. H., district maintenance superintendent	5,124.90	582.60
Arnold, Tom, laborer	57 50	
Aronson, Ed, mechanic	2,592.10	97.65
Asburry, Raymond, chainman	300.00	
Ashby, Clifford, laborer	524.03	
Ashe, Clifton E., chainman	1,361.29	
Asher, Clarence, timber inspector	2,087.75	
Ashley, Milton, laborer	1,846.75	
Ashwell, Dewey L., truck driver	1,769.70	
Ashworth, Roy W., timekeeper	288.86	
Atherton, Earl, laborer	154.45	
Atkinson, Lee E., laborer	753 55	
Aubert, George, truck driver	337 65	
Ausland, Warren, chainman	159.11	
Ausland, Willis M., transitman	2,829.22	
Austin, Howard, rollerman	97.35	
Ayer, Arthur, truck driver	74.53	
Badger, C. L., truck driver	88 75	
Badley, R. H., section helper	2,051.50	
Bagnall, Geo. W., draftsman	3,345.31	267.55
Baier, Tracey P., pilot car driver	84.75	
Bailey, R. G., laborer	422.10	
Bainter, E. O., section foreman	2,454.23	
Baird, Esther, clerk	976.00	
Baird, Wm., laborer	6.30	
Bairey, Pearl, clerk	2,365.81	
Baker, C. H., laborer	1,472.00	
Baker, Ell, lineman	737.00	
Baker, F. J., laborer	59.50	
Baker, Geo. C., transitman	3,320.69	
Baker, H. M., boilerman	1,036.45	6.60
Baker, John, transitman	3,222.83	
Baldock, R. H., state highway engineer	10,462.07	780.30
Balgaard, Orville, shoveler	416.91	
Bangert, J. B., bridgeman	2,005.35	
Banick, A. A., laborer	200.70	
Banks, H. R., chainman	2,026.81	2.75
Bannick, Leonard, truck driver	2,058.60	
Bany, P. J., assistant bridge foreman	2,788.89	
Barbar, Kent, flagman	33.00	
Barbee, D. J., transitman	3,573.31	
Barker, Bert, laborer	25.20	
Barker, John A., chainman	2,268.05	1.00
Barker, Milo H., raker	1,343.56	
Barkwell, B. L., mechanic	2,386.65	8.30
Barlow, Frank, truck driver	830.18	
Barlow, James E., laborer	491.53	
Barnard, Fred H., truck driver	1,440.90	
Barnes, F. E., truck driver	1,328.16	
Barnes, Lloyd E., trimmer	2,587.08	
Barnes, R. G., assistant engineer grade B	3,600.00	6.95
Barnette, Milton, office assistant	145.16	
Barnhart, Forest, paintman	424.31	

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Barnhart, Geo. A., levelman	$2,796.66	$
Barnum, R. P., laborer	53.50	
Barnum, S. A., foreman	2,490.48	
Barnwell, Earl E., computer	2,764.00	.50
Barnwell, Lloyd R., rodman	200.00	
Barrett, H. E., supervisor	1,738.04	92.45
Barrett, H. E., supervisor		*246.16
Bartel, Kenneth, chainman	2,320.00	
Basler, Roy V., laborer	259.20	
Bates, Alfred, laborer	51.50	
Bates, Eldon W., laborer	99.83	
Bates, H., laborer	22.25	
Batzner, Leonard, grader operator	626.80	
Baxter, Herman M., watchman	293.57	
Bayles, Chas. C., draftsman	217.90	
Bayless, Chas. F., truck driver	2,107.70	
Beakey, John, traffic engineer	5,174.18	680.10
Beal, R. W., laboratorian	120.83	
Beall, Harryette, typist	806.48	
Beals, Milton, section helper	666.04	
Beam, Guy, section helper	1,919.25	
Beardsley, Marion C., office assistant	53.33	
Becker, Margaret, typist	1,840.00	
Becker, O. R., laborer	991.00	
Beckman, J. N., rollerman	224.27	
Bedingfield, J. A., carpenter	2,476.23	
Beebe, Paul C., party chief	386.30	
Beech, Charles Q., partyman	183.23	93.15
Beers, Albert, laborer	515.25	
Beeson, James J., laborer	895.75	
Behrens, Joe C., office assistant	145.16	
Belan, M. F., bridge operator	2,320.00	
Beldin, Rae W., file clerk	2,267.46	
Beling, E., laborer	1,935.30	
Bell, J. R., laborer	474.40	
Bellamy, J. W., section foreman	2,305.12	
Bellew, E. T., inspector	2,158.09	
Bellmore, Harris C., truck driver	1,153.16	
Bellus, Leslie, truck driver	2,813.78	6.40
Belshee, B. F., inspector	1,007.71	
Benedict, A. V., assistant engineer	3,684.04	7.00
Bengoa, Cleto, transit rodman	2,395.49	
Bennett, Ralph, laborer	404.05	
Benscheidt, A., bridge engineer	3,554.14	2.25
Benson, Harry G., right of way agent	3,978.45	908.85
Bentley, E. E., right of way agent	3,903.38	391.85
Bergeron, Paul A., tapeman	703.03	2.65
Berks, Frank, truck driver	1,963.09	
Berks, Geo., section foreman	2,462.06	
Berlin, Geo. H., draftsman	3,603.31	
Berry, Frank J., grader operator	609.22	
Besack, B. K., rollerman	277.62	
Betts, C. S., axeman	336.77	
Betzer, Grover R., flagman	225.35	
Betzer, Ray, clerk	3,210.21	
Bewley, Carl, truck driver	715.90	
Beymer, A., truck driver	31.63	
Bickell, Harold, laborer	7.50	
Bickford, Alene, stenographer	278.71	
Bickmore, E. G., district maintenance superintendent	4,806.60	83.60
Biehler, Bert, mixerman	1,912.49	

* Private car mileage.

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Bihl, Gordon K.	$ 996.00	$ 2.85
Bihl, L. F.	846.99	
Bihl, W. D., timekeeper	2,032.91	
Billings, George, laborer	57.00	
Binder, F. L., laborer	75.15	
Birch, Beryl, carpenter	1,037.25	
Bishop, J. N., maintenance engineer	8,096.02	587.25
Bishop, Roy, retort operator	856.24	
Bissell, Rex I., inspector	1,716.36	
Bittner, Sam, laborer	334.90	
Bixby, V. H., laborer	1,766.75	
Black, Geo. F., party chief	402.75	
Blanchard, A. F., laborer	77.50	
Blanchard, Joseph, foreman	34.67	
Blevins, Fred, tractor operator	133.48	
Bliss, Art, truck driver	199.50	
Bliton, A. H., chainman	915.32	.45
Bliven, Howard, watchman	2,132.85	
Blomberg, Alfred, truck driver	94.68	
Blomberg, F. J., truck driver	199.30	
Bloom, Manil, truck driver	71.50	
Bloomberg, Carl, truck driver	305.50	2.35
Blume, Sherman L., truck driver	133.93	
Boardman, Kenneth, chairman	2,129.68	
Boardman, S. H., parks engineer	5,577.78	1,156.80
Boeche, Wm., truck driver	1,850.55	
Boldt, Leroy, foreman	2,718.20	
Bond, Milton, laborer	36.90	
Bond, Roland, bridgeman	1,620.35	
Bones, Walter J., laborer	1,903.95	
Bonewitz, Noah J., traffic recorder	18.00	
Bonnett, C. A., engineer's assistant	2,806.00	6.80
Bontrager, A. F., truck driver	1,969.54	3.50
Boock, E. A., flagman	456.76	
Boone, Geo., grader operator	2,001.29	
Boor, Clarence, section foreman	2,254 15	
Booth, C. M., laborer	23.40	
Booth, E. M., resident engineer	5,124.90	112.65
Booth, Mart, laborer	222.50	
Borah, M. E., section helper	1,420.45	
Borgaard, Alfred C., laborer	1,733.05	
Borgaard, Fred O., section helper	1,971.20	
Bostrack, Russell, laborer	1,783.90	
Boswell, A. C., laborer	300.20	
Bothwell, H. F., laborer	275.85	
Boucher, Charley, laborer	78.75	
Boutwell, Paul D., partyman	121.94	39.20
Bowen, Audrey, truck driver	1,941.00	
Bowman, H. H., laborer	356.85	
Bowman, L. A., section helper	1,987.05	
Bowman, N. S., laborer	18.00	
Bowman, Roger, bridgeman	2,045.20	
Bowman, William, grader operator	2,359.34	
Bowne, W. E., chainman	1,826.00	
Boyd, David G., laborer	291.15	
Boyd, Roy, laborer	179.78	
Boyer, Frank, grader operator	303.53	
Boyer, Fred, shovel operator	2,407.31	
Boyer, W. S., laborer	130.05	
Boylan, M. E., shoveler	232.75	
Bradford, D. T., carpenter	116.38	
Bradford, M. T., carpenter	2,395.19	

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Brady, Joe, laborer	$1,397.45	$
Bragg, Ralph H., raker	1,861.14	
Bramblett, C. W., foreman	3,170.13	12.45
Bramhall, Joe, tender driver	37.76	
Bramlette, Clyde, foreman	1,615.92	
Bramlette, Dick, section helper	1,892.15	5.15
Bramlette, J. C., laborer	1,752.55	
Branson, A. P., draftsman	3,462.32	
Bray, Marion, leverman	284.00	
Breding, Carl, laborer	1,329.46	2.15
Brescht, Edward, flagman	84.00	
Bressler, Geo., mechanic	2,680.53	
Brewer, Berry, section helper	2,300.94	
Bricker, J. H., laborer	361.35	
Bright, H. H., mechanic	2,691.52	
Brinnon, J. E., truck driver	182.05	
Bristow, R. E., section foreman	2,492.70	
Broadwell, H. C., resident engineer	4,425.27	2.00
Brock, Walter E., truck driver	1,009.20	
Brokke, Julius, laborer	39.25	
Brolliar, Edwin J., section helper	1,945.40	5.90
Bromley, J. G., district maintenance superintendent	5,124.90	270.81
Brookhart, W. B., laborer	1,566.83	
Brookhouse, Joe, laborer	103.45	
Brooking, Oren, bridgeman	2,292.70	
Brooks, B. A., laborer	158.83	
Brown, Charlie, raker	1,140.57	
Brown, Don, truck driver	128.70	
Brown, Herbert, carpenter	140.00	
Brown, O. V., grader operator	2,043.19	
Brown, Ray E., truck driver	1,438.45	
Brown, Robert F., truck driver	97.45	
Brown, R. E., paintman	1,104.80	
Browning, R. C., section helper	2,216.20	
Brueser, O. W., laborer	1,957.10	
Bruijn, John, laborer	636.75	
Brunell, Leo, mechanic	2,385.07	
Bryant, Stanley, bridgeman	2,120.75	
Buchanan, Alvin, rodman	2,172.19	4.55
Buchanan, W. A., flagman	157.00	
Bucholtz, Lester, bridgeman	2,104.90	
Bucknum, W. H., section foreman	2,465.59	
Buebke, Carl C., office assistant	145.16	
Buell, Otis, laborer	554.58	
Buffmire, M. R., grader operator	130.98	
Bull, Barney, section foreman	2,597.85	3.10
Bull, F. R., motor grader operator	2,355.61	
Bunch, Melvin, truck driver	827.90	2.95
Bunch, Sam S., section foreman	2,247.18	
Buntting, J., laborer	360.00	
Burch, John T., resident engineer	4,144.89	.30
Burch, Lyle, truck driver	1,463.20	
Burch, Roy R., shop helper	2,573.07	
Burdett, W. H., topographer	2,951.04	3.40
Burgoyne, Peter J., laborer	607.55	
Burk, Clifford G., computer	2,614.25	
Burke, A. J., truck driver	1,755.34	7.90
Burke, F. T., laborer	1,612.30	
Burkett, W. E., laborer	1,645.25	
Burns, N. L., laborer	83.50	
Burt, A. M., section foreman	2,383.41	2.35
Burt, E., bridge foreman	3,604.21	

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Burtis, H. W., watchman	$2,458.71	$
Burton, H. J., motor grader operator	2,127.48	
Burton, J. B., tapeman	198.00	*97.56
Bush, William H., office assistant	236.67	
Buswell, Ed., truck driver	1,911.09	
Butervich, V. F., inspector	2,927.26	10.30
Butts, Chester, truck driver	1,686.70	
Butts, Lester, leverman	147.94	
Byers, Alva, truck driver	1,945.25	
Byers, Victor, laborer	93.25	
Byington, Wayne, shoveler	79.75	
Byrd, Andy, bridgeman	1,983.50	
Cain, C. T., section foreman	2,260.52	
Calaba, Jerry, truck driver	115.29	
Calkins, Earl, bridge inspector	1,081.82	
Callahan, Timothy, laborer	286.65	
Callahan, Wilda, clerk	1,420.00	
Callaway, Henry, computer	2,759.40	1.00
Callison, R. G., blacksmith	2,614.59	
Cameron, Keith, timekeeper	2,026.57	
Cameron, Malcolm, blueprinter	2,107.22	
Cameron, M. E., laborer	83.50	
Cameron, Tom, truck driver	789.64	
Camp, John, inspector	63.33	
Campbell, C. W., carpenter	2,432.50	
Campbell, E. G., right of way agent	1,082.63	
Campbell, Frank, truck driver	1,415.99	
Campbell, J. K., shop superintendent	3,684.21	9.66
Campbell, Lenore, clerk	125.99	
Campbell, Lonnie H., laborer	330.30	
Campbell, L. P., Jr., inspector	1,098.35	.90
Campbell, William, section foreman	2,227.49	.50
Campbell, William G., truck driver	61.69	
Cannon, C. D., division office engineer	4,171.43	
Cannon, E. E., foreman	2,924.46	
Cantine, C. E., bridge engineer	2,592.45	3.75
Cantine, E. F., inspector	145.16	
Cantrill, O., grader operator	2,044.30	
Cantrill, Roy, inspector	2,094.86	3.00
Cantwell, Robert, laborer	83.25	
Capp, Donald, truck driver	21.24	
Cappa, Francis X., party chief	284.12	*66.60
Carder, A. B., sectionman	2,282.88	6.10
Carder, Clyde, laborer	553.50	
Carder, Melvin, working foreman	1,207.55	
Cardiff, Edwin, truck driver	459.95	
Carey, R. B., laborer	24.30	
Carleton, J. C., inspector	2,024.61	
Carlin, Emery, section helper	1,946.55	
Carlin, Henry, section foreman	1,887.20	
Carlin, James, truck driver	564.80	17.30
Carns, C. E., section foreman	2,612.19	4.20
Carpenter, Ed., truck driver	1,969.50	
Carpenter, L. C., foreman	2,556.12	1,305.80
Carpenter, R. W., tapeman	1,252.05	
Carpenter, T., section helper	2,271.19	
Carpenter, W. B., stackman	2,671.11	
Carr, Geo. L., computer	3,036.88	4.35
Carson, Bill, truck driver	546.10	
Carson, C. T., section foreman	2,172.45	
Carter, Clarence, section foreman	2,219.89	

* Private car mileage.

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Carter, C. E., resident engineer	$5,046.43	$ 306.25
Carter, Elton, laborer	25.20	.....
Carter, Walter, section foreman	2,565.99	.....
Casebeer, Geo. W., raker	642.01	.....
Casey, Forrest, street foreman	2,328.76	8.55
Cason, Paul, truck driver	1,990.15	.....
Cattrell, J. W., bridge inspector	769.61	3.50
Cearley, Arthur, laborer	85.50	.....
Cearley, Charles, laborer	1,025.10	.....
Cearley, R. H., truck driver	288.10	.....
Chamberlin, Carl, inspector	13.33	.....
Chamberlin, G. M., clerk	2,489.03	.....
Chandler, L. R., resident engineer	4,374.75	7.50
Chandler, M. F., stockman	2,201.63	47.75
Chandler, Wm. E., division engineer	7,674.79	384.80
Chapman, A. L., inspector	2,278.65	.....
Chapman, J. C., resident engineer	4,404.71	.....
Chapman, Merton, laborer	1,329.65	.....
Chapman, V. L., truck driver	1,819.85	.....
Chase, O. A., design engineer	5,799.52	27.40
Chase, Robert C., tapeman	243.00	34.35
Chase, Russell, truck driver	2,000.14	.....
Chidsey, Edward, resident engineer	4,374.75	88.20
Chillis, David, helper	2,333.24	.....
Chilton, John, laborer	152.50	.....
Choate, A., truck driver	1,127.25	3.15
Choate, J. T., truck driver	266.60	.....
Christensen, Chris, truck driver	1,675.13	.....
Christian, G. R., laborer	93.60	.....
Christiani, J. L., truck driver	1,937.65	.....
Christman, E. L., inspector	70.00	.....
Circle, L. M., laborer	1,754.30	.....
Clark, D. L., laborer	728.67	.....
Clark, Erwin, sign helper	1,826.78	476.40
Clark, Geo. M., section helper	1,943.80	.....
Clark, G. D., truck driver	199.98	.....
Clark, Howard, laborer	181.35	.....
Clark, James, truck driver	75.00	.....
Clark, J. A., assistant bridge foreman	2,622.02	.....
Clark, S. D., truck driver	1,877.20	.....
Claus, Irving C., miner helper	1,007.49	.....
Clawson, Otto, mechanic's helper	493.83	.....
Clayton, T. E., lineman	123.25	.....
Cleaver, John, truck driver	2,235.97	.....
Clifton, Chas., foreman	1,985.73	.....
Cline, Jack, partyman	107.42	92.75
Clinefelter, Lester, inspector	2,720.32	.....
Clutter, Bryson, head lineman	1,481.06	.....
Clymer, E. H., cost analyst	3,683.62	747.80
Coblantz, Jack M., section helper	2,254.19	.....
Coffey, Victor H., resident engineer	3,717.95	6.35
Coffman, W., laborer	1,769.15	.....
Cole, Charles, laborer	72.00	.....
Coleman, Neil, laborer	6.00	.....
Coleman, Roland W., computer	2,139.38	.....
Coles, Charles, laborer	62.55	.....
Collier, C. D., transitman	3,222.83	.....
Collier, E. A., division engineer	7,674.79	600.75
Collingwood, Roy L., tapeman	24.00	.....
Collins, Charles S., chairman	190.32	.....
Colvi, Geo., washer	2,153.10	.....
Combs, Don, laborer	729.25	.....

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Confer, H. P., section foreman	$2,388.93	$ .....
Conner, Cloyd, flagman	103.25	.....
Conner, Donal, inspector	1,815.10	.50
Conner, John, tapeman	213.00	*151.76
Conner, Perry, office assistant	173.63	.....
Conner, Thomas, laborer	203.40	.....
Connors, J., bridgeman	17.60	.....
Converse, Carrol E., section foreman	2,164.50	.....
Conway, Harry E., transit-rod	2,330.61	.....
Conway, L. W., grader operator	2,266.35	.....
Conway, Matt, oiler	3,000.00	.....
Cook, A. A., truck driver	1,890.48	.....
Cook, Howard, truck driver	975.91	5.65
Cooksley, Jack, foreman	1,747.53	.....
Cooley, Edwin, laborer	42.30	.....
Coons, H. B., grader operator	1,597.35	.....
Cooper, Donald H., office assistant	93.33	.....
Cooper, Duahen, pitman	44.75	.....
Cooper, Forrest, resident engineer	4,729.07	91.70
Cooper, Harvey, truck driver	1,635.40	.....
Cooper, Irwin, inspector	746.82	34.80
Cooper, J. G., section foreman	2,539.31	.....
Cooper, Taylor J., truck driver	1,663.40	.....
Coopey, Martin P., supervisor	149.05	59.10
Coopey, Martin P., supervisor	.....	*159.00
Cork, M. F., laborer	1,670.58	.....
Cornell, Charles, head chainman	2,469.03	9.30
Cornell, H. A., chainman	440.23	4.14
Cornett, Clay, party chief	3,498.81	7.70
Cory, Frank, truck driver	76.45	.....
Coseboom, M. W., carpenter	2,407.23	.....
Coshow, O. P., truck driver	786.54	.....
Cottingham, Willard, truck driver	973.34	2.90
Coulter, Eleanor, office assistant	167.74	.....
Courison, Richard F., inspector	341.94	2.00
Covert, Wm. W., kettleman	738.23	.....
Cox, Bert, laborer	193.50	.....
Cox, Norman, section helper	1,991.35	.....
Cox, O. R., foreman	2,627.20	.....
Cox, R. E., chainman	1,383.99	.....
Cox, Stephen B., chainman	206.67	.....
Cox, Victor, axeman	289.94	.....
Cozad, Oscar, laborer	7.00	.....
Crain, M. R., bridge engineer	3,564.21	182.45
Cramb, D. M., chainman	1,244.18	8.15
Cramblett, Harry, laborer	229.40	.....
Crampton, Wm. A., laborer	1,493.96	.....
Crawford, Harold, axeman	1,705.16	.....
Crawley, C. C., section foreman	2,310.20	.....
Cress, Glenn, laborer	1,590.20	.....
Crews, W. C., office assistant	4,191.25	.....
Cribbins, Dan, laborer	1,776.70	.....
Cribbins, W. R., truck driver	1,810.33	.....
Crivella, Eddie, laborer	45.50	.....
Crocker, C. W., transit-rod	2,282.88	1.25
Crone, Roy, laborer	705.68	.....
Crosland, A. D., laborer	194.85	.....
Crossley, Alice B., clerk	366.90	.....
Crossley, Ed, laborer	878.40	.....
Crowell, Byron W., bridgeman	1,078.12	.....
Crowther, S. F., laborer	22.05	.....

* Private car mileage.

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Crumpacker, Edgar, tapeman	$ 263.33	$ .40
Culp, Alva L., shoveler	370.32	
Cummings, C. L., timekeeper	937.90	
Cunningham, Robert, pitman	138.13	
Cunningham, T. C., laborer	1,767.10	
Curran, Dan, computer	2,536.52	
Curran, John, tapeman	48.00	
Currie, J. W., chainman	145.16	
Currie, Mabel, stenographer	2,420.35	58.70
Currier, Al D., section helper	2,218.49	
Currier, W. W., section foreman	2,441.19	
Cusick, H. B., inspector	455.17	
Cutler, Oscar, assistant office engineer	5,511.16	846.90
Cutler, Robert M., section foreman	2,218.11	
Dade, L. R., section foreman	2,535.37	
Dahl, Carl, truck driver	25.30	
Dahlberg, Dorothy, typist	405.16	
Daimler, C. F., street foreman	2,106.17	
Dakin, Ivan, general foreman	3,935.43	69.90
Dalrymple, Wm. H., inspector	693.55	3.00
Daniels, Carl S., inspector	1,763.75	
Danielson, Evelyn, punch machine operator	952.50	
Darby, Claude H., designer	4,642.44	
Darby, Wilbur M. computer	3,210.21	
Daron, Nathan, blademan	13.57	
Darrar, Carl, section foreman	1,568.00	
Darting, Ralph E., laborer	634.05	
Dauelsberg, Oskar, levelman	784.27	.35
Davenport, Lloyd L., magnet operator	1,156.17	838.25
Davidson, D. A., truck driver	1,046.88	
Davidson, Frank, section foreman	2,218.95	13.85
Davidson, H. W., painter	2,054.99	
Davidson, L. C., greaser	2,165.58	
Davidson, Paul L., truck driver	87.18	
Davidson, W. G., rollerman	2,061.87	
Davies, Ivor, tapeman	113.92	
Davies, L. M., inspector	2,173.22	50.65
Davies, P. E., clerk	3,210.21	
Davis, C. C., shoveler	270.36	
Davis, D. D., chainman	70.00	1.50
Davis, Harrison, foreman	2,636.83	
Davis, Russell, truck driver	77.29	
Davis, W. C., watchman	1,411.59	
Dawson, Paul, partyman	130.65	111.20
Dean, Avon J., stakeman	663.00	
Dean, A. B., resident engineer	4,729.08	2.35
Deardorff, Joe, laborer	1,834.70	
DeBolt, Warren, laborer	1,037.35	
Deets, Ray, truck driver	58.00	
DeFrance, I. A., district maintenance superintendent	4,971.49	203.30
DeGeeter, Peter, bridgeman	2,134.02	
DeJardin, Lois, stenographer	2,247.86	5.40
DeJoode, A. B., carpenter	649.03	
DeLancey, R. W., bridge inspector	431.04	.50
Delaney, S. E., chainman	1,884.52	
Dellinger, Arnold, laborer	21.60	
DeLong, Lawrence, inspector	53.33	
Delp, H. C., street foreman	1,699.23	87.08
Delp, S. C., truck driver	1,867.10	.85
Delyria, George, truck driver	1,622.05	2.95
DeMuth, Jerry, section foreman	2,511.08	2.10
Dennison, Jesse, grader operator	2,028.51	5.20

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Denson, Walter, truck driver	$1,738.15	$
Denstdet, L. D., truck driver	1,160.00	
Derrick, J. G., computer	185.59	
DeSart, D. G., engineer's assistant	3,210.93	20.85
Desch, W. F., assistant timekeeper	558.77	4.50
DeSouza, J. W., assistant attorney	6,135.50	757.10
Devaney, V. J., chainman	898.74	
Devers, J. M., attorney	9,155.93	884.05
Devers, J. R., chainman	343.00	
Devore, Elvin, truck driver	1,925.25	
Devore, W. M., laborer	1,617.00	
Dexter, Harlan, laborer	132.30	
Dey, Ross, truck driver	1,459.03	
Dibble, F. C., truck driver	28.32	
Dick, Norman, truck driver	906.35	
Diehl, Henry, truck driver	1,965.00	
Dietz, E. J., mechanic	2,645.71	15.10
Dietz, Geo., stockman	2,594.69	
Dillabough, B. L., caretaker	192.00	
Dimick, A. R., mechanic's helper	1,928.33	
Dimick, Ralph, shoveler	1,072.82	
Dishner, Ammon W., laborer	18.90	
Dishner, F., laborer	95.85	
Ditto, Glenn A., grader operator	1,959.42	
Dixon, L. P., flushcoater	629.76	
Dizney, Clarence, office assistant	93.33	
Doane, S. W., bridgeman	2,356.51	
Dobrkovsky, Fred, laborer	1,231.28	
Doerfler, E. H., laborer	99.50	
Dolan, Glen O., draftsman	3,246.15	1.15
Dominick, G., laborer	80.10	
Domogalla, Vern, helper	1,065.51	96.90
Don, James, computer	3,105.81	8.75
Donaldson, John, laborer	922.15	
Doney, Lewis, laborer	43.20	
Donham, Walter R., office assistant	100.00	
Donnelly, W. A., truck driver	294.68	
Dooley, John, laborer	194.45	
Dorn, Arthur Z., foreman	1,994.14	
Dorner, W. J., inspector	188.48	
Doty, E. V., laborer	495.55	
Doughty, Wm. O., tapeman	84.00	33.12
Douglas, Vernon, retort operator	1,098.80	
Dove, Joseph L., tapeman	588.24	1.60
Dow, L. N., resident engineer	3,447.93	149.00
Dowell, Gordon, laborer	188.95	
Dowling, A. A., laborer	1,117.08	
Downey, Harry L., chainman	1,175.37	29.65
Downing, Grant, truck driver	1,612.90	
Dozier, Phil, laborer	1,773.15	
Dresser, Marshall, resident engineer	5,673.60	
Dueber, P. G., metals checker	129.03	
Duffield, Gordon, laborer	149.00	
Duffy, Arthur, transitman	3,225.00	73.10
Dunaven, W. F., laborer	1,518.20	
Dunham, C. M., laborer	194.85	
Dunn, Lyman, section foreman	2,179.15	
Durant, Geo. S., party chief	313.34	*70.03
DuRette, C. A., resident engineer	3,739.41	5.75
Dwyer, Dick, laborer	216.83	
Dye, A. C., laborer	1,765.84	

* Private car mileage.

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Dyer, C. N., truck driver	$ 63.53	$ .....
Dysinger, C. A., truck driver	11.28	.....
Earl, Walter, truck driver	1,323.61	.....
Eason, F. D., assistant division engineer	6,135.50	406.90
Eason, Stearns, topographer	1,708.96	8.05
Eaton, B. E., laborer	288.45	.....
Eddy, Carl G., section foreman	2,421.77	.....
Eddy, Harold, kettleman	114.87	.....
Eddy, Harry, transit-rod	2,750.03	7.20
Eddy, Joe, section helper	1,982.76	.....
Edgar, Kenneth, laborer	80.00	.....
Edgerton, Roy C., materials inspector	70.00	.35
Edwards, A., laborer	1,758.65	.....
Edwards, Frank, working foreman	2,053.50	.....
Edwards, Henry, watchman	1,081.39	.....
Edwards, Herbert, truck driver	328.98	.....
Edwards, L. L., section foreman	2,283.06	.....
Edwards, M. D., laborer	1,042.43	.....
Edwards, Tom, resident engineer	3,598.00	14.00
Eggen, Orvel, laborer	213.98	.....
Eggstaff, Ralph, sign engineer	3,684.21	675.15
Eksman, Gus C., inspector	1,535.76	.40
Elder, Marguerite, stenographer	1,905.16	.....
Ellingsen, Herman, materials inspector	20.00	.....
Elliott, Celeste, stenographer	833.55	.....
Elliott, Charles E., bridgeman	2,145.00	.....
Elliott, Elbert, laborer	715.36	.....
Elliott, E. W., teamster	506.43	.....
Elliott, P. S., laborer	586.80	.....
Elliott, Ray, bridgeman	2,142.07	.....
Ells, Ralph, laborer	1,698.30	.....
Ellsworth, H. E., district supervisor	181.28	41.15
Ellsworth, H. E., district supervisor	.....	*148.52
Elspas, C. A., axeman	607.19	.....
Elspas, R. M., flushcoater	529.84	.....
Ely, E. E., bridge operator	3,110.21	*21.15
Embrey, Elton B., truck driver	387.88	.....
Emmrick, Frank, truck driver	1,966.70	2.75
England, I. B., section foreman	2,591.19	.....
Enneberg, Carl, motor grader operator	2,192.73	.....
Ennos, E. R., bridgeman	2,110.45	.....
Epperly, C. S., mixerman	2,030.29	.....
Epperson, E. L., grader operator	1,743.45	.....
Epperson, Milton, laborer	1,339.66	.....
Erbe, C. F., mechanic	2,724.84	2.55
Erdman, Ronald H., laborer	1,170.75	.....
Erickson, E. W., inspector	1,517.92	138.60
Erickson, Henry, laborer	67.50	.....
Erikson, Erling, laborer	794.70	.....
Erpelding, Magdaline, typist	1,843.08	.....
Erskine, Henry, section foreman	2,570.39	.....
Erwin, H. G., truck driver	238.95	.....
Esmay, John N., section helper	1,999.31	1.90
Etzel, I. G., spot foreman	550.60	4.25
Etzwiler, Harry, laborer	155.70	.....
Evans, Alvin E., laborer	1,849.85	.....
Evans, Frank, laborer	1,065.70	7.35
Evans, T. E., truck driver	1,959.25	2.15
Everett, T. E., laborer	206.55	.....
Everson, John, draftsman	2,234.15	.....
Evick, Floyd, laborer	236.03	.....

* Private car mileage.

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Ewan, Albert, section helper	$2,385.35	$
Fair, F. H., grader operator	2,190.21	
Fairbanks, Homer, section helper	1,914.10	3.99
Falkenhagen, D., clerk	3,190.21	16.95
Falvey, Bill, laborer	1,750.20	
Fanning, Floyd, section helper	1,869.30	
Faris, Guy, section foreman	2,343.42	
Farnum, L. B., mechanic	2,719.14	20.65
Farrar, F. W., resident engineer	2,878.14	2.20
Farrow, William H., office assistant	76.67	
Faulkner, J. T., office assistant	2,457.73	
Faunce, Arthur, truck driver	206.75	
Faust, R. N., chainman	2,015.15	18.44
Fay, Earl C., section helper	2,192.65	
Ferguson, Clarence, retort operator	1,163.38	1.95
Ferguson, E. W., section helper	1,889.19	17.15
Ferguson, James C., laborer	157.03	
Ferguson, J. C., laborer	911.35	
Ferguson, Lee, section foreman	2,318 68	
Ferns, Victor, laborer	1,776.61	
Ferree, Geo. J., section foreman	2,574.78	
Fetch, Albert, laborer	66.00	
Fetch, Carl, truck driver	278.32	
Fetsch, Fred, flagman	60.25	
Fields, L. C., laborer	53.00	
Finch, O. B., laborer	337.95	
Finkbiner, N. M., materials engineer	6,018.62	136.23
Finley, A. A., laborer	491.80	
Finley, Brent, supervisor	2,020.90	34.85
Finley, Brent, supervisor		*189.68
Firkins, M. D., carpenter	2,173.63	
Fischer, Martin, welder	2,470.79	
Fisher, Don, materials checker	50.00	
Fisk, Howard, sign helper	63.50	
Fisk, O. E., section foreman	1,359.89	
Fitch, Wilford H., laborer	79.20	
Fitzke, E. H., truck driver	95.43	
Fitzpatrick, William, truck driver	63.00	
Flanagan, C. E., bridge foreman	3,370.61	
Flanagan, H. H., bridge operator	2,689.11	49.35
Flavelle, Bob, truck driver	51.75	
Fleek, A. L., laborer	1,712.15	
Flesher, J. W., flagman	221.36	
Flesher, J. W., Jr., laborer	190.54	
Flesher, Arthur J., truck driver	1,466.13	
Flesher, Bill, partyman	124.84	
Flock, Robert, bridge foreman	3,462.26	2.80
Floer, Christian, materials inspector	1,828.39	
Flott, Alexandria, laborer	8.00	
Flynn, Jack R., chainman	2,104.80	
Foe, K. D., laborer	38.75	
Foister, R. P., laborer	1,035.75	
Folck, Kenneth, truck driver	60.40	
Folston, James E., transit-rod	3,210.21	3.05
Forbes, Frank A., section helper	1,995.98	
Ford, Austin J., resident engineer	3,762.55	
Ford, A. W., truck driver	112.75	
Forquer, Wiley, laborer	1,248.45	
Forrest, R. A., transitman	3,573.31	
Forty, B. V., section foreman	2,548.05	
Forty, J. L., stakeman	1,275.77	

* Private car mileage.

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Fossen, A. A., resident engineer	$3,403.90	$
Fowler, Jos. H., axeman	450.00	
Fox, Chas. G., truck driver	750.40	
Fox, Don, grader operator	286.18	
Frack, Ernest, laborer	208.80	
Frack, W. O., truck driver	778.66	
Fraley, V. R., chainman	2,028.40	
Francis, James, clerk	3,210.21	
Franklin, L. W., resident engineer	3,647.96	.40
Frazier, Clyde, laborer	1,383.93	
Fredericks, Harry J., laborer	58.25	
Freeman, C. J., chainman	1,196.00	
Freeman, M. L., section helper	2,323.80	
Frey, Frank C., section foreman	2,526.52	
Frink, Howard E., office assistant	270.00	
Fritsch, Richard W., truck driver	50.25	
Frum, C. H., chainman	236.67	
Fuller, Gordon, truck driver	1,170.00	
Fuller, Russell H., assistant draftsman	2,342.79	
Fullerton, Agnes, stenographer	2,080.10	
Fulp, Russell, grader operator	1,952.00	
Furman, Roscoe R., truck driver	1,881.43	40.95
Furrow, R. A., resident engineer	5,760.00	
Fussell, John, laborer	7.00	
Gabriel, L. W., assistant bridge operator	3,000.00	
Gage, Glenn, section helper	2,155.65	
Galis, Gus, laborer	6.30	
Gake, Albert S., grader operator	1,643.55	
Gale, H. E., inspector	793.55	.35
Gall, Cecil C., resident engineer	4,729.08	14.70
Gallacher, Alex, section foreman	2,287.25	
Gallaher, M. W., inspector	2,016.59	
Galvin, Terry, pitman	510.10	
Gann, Fred, truck driver	1,756.70	
Gann, Henry, laborer	130.20	
Ganz, Phyllis, stenographer	80.00	
Gardiner, C. L., right of way agent	4,876.46	355.95
Gardner, C. A., assistant engineer	3,940.40	5.30
Gardner, M. C., grader operator	1,200.28	
Garfield, C. E., section foreman	2,281.84	
Garrett, Robert, raker	882.22	
Garrison, Bayan, truck driver	226.70	
Garrison, P. H., laborer	90.45	
Garrison, W. J., laborer	77.50	
Gates, W. M., truck driver	97.75	
Gayman, Stanley, boilerman	1,290.98	
Gearhart, John B., chainman	287.67	.35
Gemmell, Chester H., traffic checker	127.74	26.50
Gemmell, Chester H., traffic checker		*55.64
Gentry, Floyd C., truck driver	203.60	
Gentry, Geo. H., blacksmith	2,277.86	
Gentry, Geo. V., tractor operator	95.50	
Gentry, Vern, oiler driver	140.47	
Gentzkow, Robert S., laborer	59.50	
Gentzkow, William S., laborer	62.75	
Gerber, Dave W., laborer	1,714.41	
Gerlach, Harry, tapeman	252.00	4.30
Gerlach, Harry, tapeman		*173.12
Gettings, Vern, shoveler	240.08	
Gibbons, W. G., bridge tender	2,180.00	
Gibson, F. W., laborer	979.75	

* Private car mileage.

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Gibson, Stanley, laborer	$ 296.50	$ .....
Gibson, W. M., mechanical helper	2,158.57	.....
Gieler, Frank, laborer	86.25	.....
Gies, Carl P., chainman	1,077.05	.....
Giesy, Grover C., flagman	196.25	.....
Gilbert, R. D., shop clerk	2,689.11	.....
Gilbreth, B., laborer	22.00	.....
Gilbreth, W. H., laborer	26.00	.....
Gildcrist, Cread, laborer	6.30	.....
Gill, Manuel, rollerman	1,634.13	.....
Gill, Virgil L., section helper	1,950.27	.....
Gillette, Ralph, section helper	1,985.50	.....
Gillette, S. B., assistant purchasing agent	5,657.23	.....
Gilliam, D. D., bridgeman	2,103.93	.....
Gilliland, Jess, grader operator	117.90	.....
Gillis, J. L., transit-rod	3.210.21	3.10
Gillmore, Clyde C., section foreman	2,514.96	.....
Gise, Robert C., party chief	1,616.50	.....
Gisholt, Lars, bridgeman	1,995.50	.....
Gisse, Roy, motor grader operator	77.72	.....
Givan, Ruth, file clerk	2,150.00	.....
Gjovik, Jacob, laborer	7.43	.....
Glaisyer, H. B., secretary	6,018.62	318.40
Glasscock, Marvin, truck driver	1,286.64	90.85
Glazier, Lou, laborer	146.93	.....
Glenn, Bob, manager traffic survey	1,542.05	264.60
Godsey, Chester, grader operator	2,000 05	.....
Gohl, Ed., section foreman	2,067.98	.....
Goodman, Sy, bridge operator	1,180.00	.....
Goodnight, V. L., district maintenance superintendent	4,360 35	88.95
Goodwin, C. W., foreman	1,828.75	.....
Gordon, C. W., bridgeman	2,094.05	.....
Gordon, Frank, laborer	333.60	.....
Gotchall, Clyde, Jr., laborer	92.00	.....
Gotchall, Clyde, Sr., laborer	32.75	.....
Gould, Geo., section helper	1,964.90	.....
Gould, Jarvis, chainman	100.00	.....
Gould, R. B., resident engineer	5,124.90	117.23
Gourley, Harold, truck driver	1,498.49	.....
Gover, Carson, pilot car driver	189.00	.....
Grable, G. C., bridgeman	2,074.70	.30
Graf, S. H., cooperative sand research supervisor	84.00	.....
Graffenberger, S. P., sectionman's helper	781.05	.....
Graham, Geo. C., engineer	3,596.51	.....
Graham, H. V., motor grader operator	124.82	.....
Graham, John H., captain in charge	3,950.86	.....
Gramse, A., section helper	2,098.85	.....
Gramse, Fred M., shovel operator	2,164.50	.....
Grant, E. J., laborer	8.00	.....
Grant, F. A., laborer	198.45	.....
Grasier, F. A., material inspector	1,006.13	1.00
Graue, V. E., stakeman	490.65	19.05
Graves, Geo. W., laborer	128.00	.....
Gray, Edward, material inspector	53.33	.....
Gray, G. S., district maintenance superintendent	3,840.90	585.60
Gray, H. E., section helper	2,185.60	.....
Gray, J. F., laborer	116.11	.....
Gray, Robert, truck driver	700.48	.....
Green, Arthur N., assistant timekeeper	558.04	.....
Green, C., truck driver	458.14	.....
Green, C. W., officeman	3,351.35	2.25
Green, J. C., density counter traffic surveyor	107.42	96.45

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Green, M. R., truck driver	$1,826.86	$
Green, Thad A. draftsman	3,265.64	.50
Green, Walter N., sectionman	2,379.85	3.50
Greenawalt, Burdette, laborer	96.00	
Greene, H. M., laborer	320.40	
Gregg, Lloyd B., payroll clerk	3,293.33	
Greiner, John C., chainman	706.67	
Grey, W. M., laborer	1,503.95	
Griffin, Robert, laborer	799.63	
Griffis, L. V., chainman	46.67	
Grimm, Zelma, stenographer and clerk	1,636.95	
Grow, Hugh, laborer	1,377.20	
Grubbe, Nelson, truck driver	412.82	
Grubbe, Rean, truck driver	686.85	
Gruchow, Grant, mechanic	2,293.63	13.90
Guild, George, laborer	158 85	
Gunkil, E. C., laborer	186.30	
Gunther, Wm., laborer	144.00	
Gwillim, O. C., laborer	670.50	2.75
Hackett, H. N., right of way engineer	4,651.56	21.40
Haft, Roy, laborer	1,213.70	
Haga, Lester E., section helper	2,187.70	
Hagemann, C. F., clerk	2,521.21	
Hagemann, French T., laboratory assistant	2,710.29	
Hagen, Art, laborer	1,677.68	
Haggblom, C. G., laborer	1,106.20	
Haggblom, L. H., laborer	251.48	
Hagmeier, J. G., computer	1,955.86	.40
Haines, Cecil, paintman	1,698.09	
Haines, Franklin, pilot car driver	206 00	
Haines, H. A., grader operator	414 85	
Hale, Lynn, laborer	215.10	
Hale, Ned, laborer	22.50	
Halik, E. F., master mechanic	5,970.62	58.10
Hall, A. A., bridgeman	452.90	
Hall, A. E., truck driver	471.56	
Hall, Frank L., draftsman	1,896.06	6.00
Hall, Loyd E., truck driver	1,336.75	
Hall, M. C., truck driver	1,932.40	
Hall, R. J., mechanic	2,744.39	37.70
Hall, W. R., truck driver	1,501.83	
Halladay, Geo., grader operator	1,815.90	
Hamilton, E., laborer	1,073.00	
Hamilton, Hollis, section helper	2,008.21	
Hamilton, I. A., grader operator	1,866.26	7.80
Hamm, C. H., laborer	684.09	2.00
Hamrick, P. A., bridgeman	1,597.05	
Handley, Kenneth, road laborer	265.50	
Hanel, Donald, road laborer	254.22	
Hanna, Lida, typist	436.13	
Hannum, Edward F., raker	1,011.17	
Hannum, Willard F., raker	1,049.95	
Hanson, A. A., relief bridge operator	1,406.55	
Hanson, H. O., district supervisor traffic survey	181.28	68.40
Hanson, H. O., district supervisor traffic survey		*190.08
Hansen, Ted, flagman	312.20	
Hanzen, W. E., chainman	23.33	
Hardcastle, Donald E., chainman	1,466.08	1.60
Hardenbrook, Homer, laborer	55.88	
Hardie, James A., office assistant	4,171.43	
Harding, A. L., timekeeper	224.42	

* Private car mileage.

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Harless, L. E., head chainman	$2,426.01	$ 6.20
Harms, Paul C., tapeman inventory survey	225.00	*102.04
Harnish, Ray, sectionman's helper	2,039.32	
Harnsberger, Edw., working foreman	2,770.89	
Harnsberger, John, working foreman	2,603.18	
Harnsberger, W. E., shovel operator	983.56	8.15
Harpst, C. W., truck driver	1,473.73	
Harra, G. W., assistant and chemist	4,171.51	29.70
Harris, Chas., laborer	88.20	
Harris, H. M., grader operator	1,520.90	
Harris, H. T., truck operator	1,505.68	
Harris, Keith, shovel operator	128.92	
Harris, M. W., leverman	2,136.47	
Harris, O. E., watchman	2,384.37	
Harris, Rav, laborer	436.50	
Harrison, Verne, draftsman	1,826.34	
Harraun, Norman, party chief—inventory survey	139.07	2.37
Hart, O. F., motor grader operator	289.51	
Hartell, Victor, laborer	1,134.60	
Hartman, E. P., party chief—inventory survey	1,883.59	
Hartrampf, Ross, computer	2,210.40	5.25
Hartzell, Henry, laborer	57.00	
Harvey, Elmer A., laborer	22.25	
Harwood, C. A., rollerman	43.07	
Hash, A L., truck driver	58.58	
Haskell, C. T., laborer	1,858.50	
Haskins, E. L., truck driver	1,747.34	
Haskins, Edwin, section helper	1,323.50	12.55
Hatch, Nick K., tapeman—inventory survey	90.00	*98.96
Hathaway, Dave, bridgeman	2,223.78	
Hathaway, Ella C., stenographer	2,425.44	
Hathaway, J. D., carpenter	2,286.84	
Hathaway, Leonard, bridgeman	2,069.00	
Hathorn, W. H., chainman	400 00	
Hawk, Leslie, motor grader operator	1,980.84	
Hawkins, Chas., laborer	183.75	
Hawkins, Jack, truck driver	2,183.19	
Hawkins, John, chainman	2,320.00	
Hawkins, Ward, chainman	1,464.94	
Hay, Lee, laborer	461.05	
Hayden, C. O., sectionman	2,637.94	
Hayes, Floyd, laborer	1,704.00	
Hayes, Ray, laborer	1,782.65	
Hayes, Sam, flagman	62.75	
Haynes, C. D., resident engineer	3,683.20	
Haynie, Clive C., carpenter	2,532.25	4.65
Hays, H. R., laborer	258.17	
Hays, Vernon R., truck driver	1,988.55	
Hazelton, Chas., laborer	752.40	
Hazelwander, H., truck driver	1,765.86	
Head, Cecil W., clerk	897.15	
Head, J. Al, supervisor—traffic survey	1,379.98	198.60
Head, Robert C., paintman	873.97	
Headings, E. C., man and team	338.25	
Healey, Mike, laborer	664.88	
Hecker, Earl, laborer	1,767.78	
Heckinger, Ray L., truck driver	1,889.70	
Hector, Wally, material inspector	177.42	
Hedrick, C. D., street foreman	2,931.60	
Heidel, Carl A., timekeeper	2,162.50	35.40
Henderson, James T., truck driver	166.10	

* Private car mileage.

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Henderson, Merril C., transitman	$2,471.51	$
Henderson, O. E., laborer	331.20	
Hendrickson, C. G., truck driver	544.92	
Henry, Chas. R., motor grader operator	79.76	
Henry, C. M., laborer	415.28	
Henry, J. L., mechanic	183.96	
Henry, S. C., laborer	1,708.98	
Hensala, Alfred, laborer	334.35	
Hensley, Fred, sectionman	2,249.33	
Henson, M. B., laborer	28.00	
Herman, C. G., gate tender	1,955.00	
Herrick, W. M., truck driver	507.11	
Hervey, Thomas E., laborer	1,632.75	
Hess, John O., transitman	3,036.57	3.85
Hesse, Loyd, truck driver	84.38	
Hester, G. C., party chief—inventory survey	1,492.29	10.30
Hetrick, Hollis, transitman	3,239.05	2.95
Heuperman, L. F., draftsman	2,459.92	
Hewitt, M. C., lineman	809.94	
Hewitt, Walter, truck driver	17.60	
Hewitt, W. H., blademan	1,500.60	
Hiatt, J. C., transitman	2,605.53	84.85
Hiatt, N. A., truck driver	1,946.85	2.40
Hickock, C. A., grader operator	184.67	
High, Clair, truck driver	62.70	
Hilderbrant, Warren, truck driver	179.85	
Hilkevitch, Nicholas, office assistant—inventory survey	76.67	
Hill, Chas., laborer	113.85	
Hill, Glen, section helper	1,980.84	
Hillman, Earl, laborer	126.50	
Hillpot, Jane, stenographer	2,050.03	
Hilyard, W. S., blademan	1,919.50	
Himes, H. F., flagman	81.50	
Hinges, K. E., office manager—planning survey	2,712.74	98.80
Hinkle, Twig, truck driver	1,967.00	.50
Hinz, E. A., chief clerk	3,351.35	
Hisel, Walter B., watchman	1,225.37	
Hix, Bruce, truck driver	345.02	
Hix, W. R., bulldozer operator	975.05	
Hoard, Norman B., chainman	940.50	.50
Hobson, Will, flagman	111.50	
Hoch, Russell, section helper	2,202.40	
Hockett, L. C., watchman and janitor	2,176.55	
Hockley, Claude C., material inspector	63.33	
Hockman, John, laborer	614.10	
Hodge, Edwin T., special duty		108.55
Hodge, W. S., district maintenance superintendent	5,124.90	
Hodgen, O., laborer	376.65	
Hodges, J. P., general foreman	3,656.21	
Hodgins, Wm., man and team	577.30	
Hoeft, Clarence, laborer	6.30	
Hoeger, E. A., bridgeman	1,029.33	
Hoffman, Hiram, laborer	12.60	
Hoffman, Tom, district superintendent traffic survey	181.28	78.10
Hoffman, Tom, district superintendent traffic survey		*215.24
Hoflich, Virgie, truck driver	2,000.75	
Hofma, E. B., shoveler	652.34	
Hogg, J. F., man and team	405.60	
Holboke, B., laborer	65.75	
Holcomb, G. W., supervisor—traffic survey	668.78	191.95
Holland, E. J., laborer	1,655.25	

* Private car mileage.

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Holland, W. H., sectionman	$2,197.45	$ 6.05
Hollenberg, R. V., bookeeper and traffic manager	4,171.43	.....
Holley, William C., chain	96.67	.....
Hollinger, Erwin, laborer	49.75	.....
Hollamon, F. M., truck driver	190.85	.....
Holloway, Lester, truck driver	319.73	.....
Holman, A. W., flushcoater	113.02	.....
Holman, Jack, boilerman	579.30	19.05
Holman, W. C., surface foreman	3,496.81	.....
Holmes, C. J., laborer	200.70	.....
Holmes, Frank D., truck driver	1,819.48	.....
Holmes, Kenneth I., laborer	1,748.90	.....
Holmes, Phillip, lineman	649.21	.....
Holmes, W. O., mechanic	2,556.57	17.75
Holst, Herbert, flagman	66.00	.....
Holton, Irving, traffic recorder	10.80	*10.40
Hoover, C. T., cost keeper	3,684.21	.....
Hoppe, Otto, mixerman	1,257.42	.....
Horning, Harry, motor grader operator	594.73	.....
Horning, Robert, truck driver	236.45	.....
Horton, Otto, sectionman	2,537.66	.....
Hossman, Frank, carpenter	2,501.88	.....
Hounshell, R. L., laborer	1,781.60	.....
Householder, Geo. D., section helper	2,005.60	.....
Houston, Paul W., draftsman	3,268.98	3.50
Howard, W. R., laboratory technician	3,210.93	.....
Howard, W. W., laborer	796.48	.....
Howell, Paul W., material inspector	122.58	.....
Howland, James, chainman	90.00	.....
Howry, John, sectionman	2,246.25	.....
Hoxie, J. E., flagman	597.30	.....
Hoxie, Oscar, foreman	3,190.21	.....
Hubbard, C. K., resident bridge engineer	3,749.13	.....
Hug, Robert, laborer	62.75	.....
Hughes, Chas. H., street inspector	587.01	.50
Hughes, N. R., laborer	14.85	.....
Hughlett, H. W., bridge foreman	3,422.26	.....
Hugill, H. S., district supervisor—traffic survey	149.05	50.95
Hugill, H. S., district supervisor—traffic survey	.....	*181.76
Hugo, Frank, mechanic	2,755.18	60.00
Hull, F. J., bridgeman	2,014.40	.....
Hull, Rex, boilerman	735.88	3.20
Humphrey, Wm., laborer	1,354.70	.....
Hunnicutt, Frank, section helper	2,015.25	.....
Hunt, F. M., timekeeper	175.23	.....
Hunter, O. E., laborer	1,068.38	.....
Huntley, Philip, chainman	420.69	.....
Hunzicker, O., truck driver	1,775.89	.....
Hurlburt, Robert G., office assistant—inventory survey	167.74	.....
Hurt, Floyd, laborer	85.50	.....
Hussey, Fred J., sectionman	2,080.57	.....
Hutchings, M. A., lineman	610.75	.....
Hutchings, Roy V., street foreman	2,302.65	.....
Hutchins, Lloyd, truck driver	1,075.15	.....
Hutchinson, Frank G., draftsman	2,447.20	35.90
Hutchinson, Frank G., draftsman	.....	*65.24
Hutchison, John, pitman	151.50	.....
Hyde, E. E., head lineman	1,846.70	.....
Hylton, Harold, flagman	231.25	.....
Hyvair, Oscar, laborer	236.25	.....
Ingels, H. G., transitman	2,763.92	.50

* Private car mileage.

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Ingerson, James, bridgeman	$1,829.64	$
Ingle, Hugh C., supervisor—traffic survey	251.80	105.17
Ingram, Edw. L., laborer	13.50	
Ingrams, Frank, laborer	50.25	
Ingrey, Helen, stenographer	3,190.21	4.35
Inman, W. S., sectionman	2,248 80	
Ireland, Irving J., truck driver	112.13	
Irvine, John W., partyman—traffic survey	24.00	12.85
Isham, John M., office clerk	2,966.86	4.05
Ismert, Ralph, laborer	902.15	4.00
Ismert, R. H., bridgeman	2,063.66	
Ison, Dale, truck driver	30.00	
Jackson, A. E., truck driver	84.98	
Jacobson, Carl, truck driver	1,797.25	
Jacobson, Ray, bridgeman	1,842.65	
Jager, Nick, laborer	1,790.10	
Jahns, R. V., snogo operator	1,184.19	33.45
Jamerson, W. T., laborer	961.00	
James, N. H., sectionman	1,745.40	1.75
Janes, L. W., laborer	73.50	
Janes, M. D., laborer	330.30	
Janz, A. E., timekeeper	646.04	
Jaqua, C. E., office assistant—inventory survey	226.67	
Jayes, John, shop superintendent	3,684.21	
Jayes, W. S., shop superintendent	3,644.21	
Jeli, George, truck driver	111.92	
Jennings, Fred, laborer	348.30	
Jensen, Ed, shovel operator	2,856.83	4.50
Jensen, L. L., resident bridge engineer	4,660.14	1.25
Jensen, Otis V., chainman	236.67	
Jesse, Wm., truck driver	350.15	
Johanson, Andrew, laborer	62.10	
Johns, C. B., mechanic	2,844.29	
Johns, C. M., chainman	905.00	111.80
Johns, Dewey, laborer	121.28	
Johns, Roy, laborer	89.03	
Johnson, A. E., bridge inspector	3,562.95	
Johnson, A. G., resident engineer	3,667.93	
Johnson, A. M., cost clerk	3,190.21	
Johnson, B. O., resident engineer	5,124.90	13.43
Johnson, C. E., blacksmith helper	1,898.28	
Johnson, C. E., rollerman	375.43	
Johnson, C. H., draftsman	1,164.06	
Johnson, Dave, laborer	39.83	
Johnson, Ernest, sectionman	2,319.36	
Johnson, E. B., blacksmith	2,752.28	
Johnson, Geo., sectionman	2,603.80	
Johnson, H. S., chainman	23.33	
Johnson, Jean, typist	21.33	
Johnson, Joe L., bridgeman	790.60	
Johnson, J. Lewis, computer	57.98	
Johnson, Lloyd C., transitman	1,116.04	3.15
Johnson, Ray T., levelman	1,165.35	.50
Johnson, Robert R., chainman	322.58	
Johnson, Ross W., man and team	81.75	
Johnson, Roy, grader operator	1,144.95	
Johnson, Virgil E., draftsman	246.96	15.15
Johnson, Wm., truck driver	2,322.97	
Johnston, E. E., resident engineer	4,374.75	58.55
Johnston, J. T., flagman	210.15	
Johnston, Lowell, resident engineer	3,474.38	7.75
Johnston, Ross R., truck driver	171.03	

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Jolly, Wm., laborer	$1,937.95	$
Jonas, Gilbert, flagman	103.00	
Jones, C. R., motor grader operator	2,051.58	
Jones, F. G., chainman	230.00	
Jones, Gilbert E., draftsman	3,573.31	
Jones, G. M., sectionman's helper	2,213.64	
Jones, J. O., caretaker	520.00	
Jones, Kermit B., truck driver	1,434.45	
Jones, N. H., shop superintendent	3,684.21	
Jones, Ollie, spotting foreman	1,702.74	4.15
Jones, Oscar L., laborer	449.40	
Jones, Roy W., office assistant—inventory survey	30.00	
Jones, S. Paul, supervisor—inventory survey	3,451.42	6.80
Jones, V. R., party chief—inventory survey	1,509.21	10.30
Jones, Wayne, flagman	111.00	
Jones, W. M., boilerman	129.34	
Jordan, C. A., resident bridge engineer	5,535.00	
Jullum, Henry, cost analyst	1,369.27	178.10
Jungers, Howard, laborer	426.79	
Jungwirth, G. F., truck driver	63.50	
Junkin, Con, foreman	2,666.67	3.10
Juntunen, Jack S., laborer	212.40	
Justice, Howard, laborer	109.20	
Justin, Norman W., laborer	566.55	
Juve, Maurice, transitman	3,331.73	11.95
Kaiser, H. R., leverman	210.73	
Kallam, Shirley, watchman	795.04	
Kamph, Frank, watchman	2,143.51	3.15
Karns, Ira, motor grader operator	2,289.14	
Kasinger, J. T., nightwatch	1,822.86	
Kasinger, L. R., shoveler	1,105.75	
Kaufman, Glen F., flagman	173.08	
Kayser, Geo., watchman	1,880.89	
Kayser, Henry, mechanic	2,444.17	
Kearns, R. R., laborer	1,470.27	
Keef, Dennis W., computer	1,052.56	236.30
Keel, Grafton, truck driver	1,680.80	
Keffer, Verlin, kettleman	230.90	
Keith, C. E., transitman	3,573.31	94.70
Kelley, C. C., resident engineer	5,124.90	31.90
Kelley, Edgar E., truck driver	706.15	
Kellogg, Robert F., computer	1,383.10	.50
Kellogg, W. H., street inspector	2,537.27	2.00
Kelly, Clyde, laborer	39.15	
Kelly, Robert E., stake artist	354.19	.35
Kennedy, C. M., weight party chief	170.97	122.00
Kennedy, N., mechanic	2,417.15	1.00
Kennen, G. J., paving inspector	2,820.56	68.50
Kennen, O. C., materials checker	129.03	11.45
Kennen, O. R., assistant engineer grade B	4,050.00	4.85
Kenney, E. A., materials checker	220.00	
Keown, Chester, tapeman—inventory survey	159.68	10.75
Keown, Chester, tapeman—inventory survey		*149.48
Kephart, Leonard P., shoveler	733.60	
Kerber, Leo, street foreman	2,700.97	
Kerber, Louis, general foreman	3,229.23	11.10
Kerns, W. M., laborer	1,842.75	
Kessell, W. C., laborer	8.00	
Ketchem, W. C., truck operator	85.25	
Keys, Arthur H., laborer	1,705.90	
Killin, Amil, mechanic	275.05	

* Private car mileage.

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Kimple, Wayne, truck driver	$ 81.95	$
King, Geo., truck driver	98.19	
King, Thomas, laborer	65.70	
Kinnear, C. H., gate tender	1,975.00	
Kinnicutt, E. W., party chief—inventory survey	518.51	
Kirby, W. K., truck operator	1,782.55	15.00
Kirkham, Leo, sectionman	2,160.90	3.55
Kirkwood, A. A., locating engineer	5,124.90	52.45
Kistner, K. L., foreman	2,412.69	37.80
Kite, K. W., laborer	602.25	
Kivett, C. L., truck driver	1,820.80	
Klein, G. N., laborer	38.25	
Klein, Kenneth M., safety engineer	3,492.65	
Kleindinst, Joe, watchman	1,623.39	
Klemsen, Geo., sectionman	2,073.77	
Kline, Robert, motor grader operater	2,295.08	
Klitz, Frank, laborer	63.00	
Klitz, Noel, mechanic	869.27	
Kneass, A. B., real property officeman	4,454.79	2.50
Knight, Chas., rollerman	524.32	
Koch, Lawrence, laborer	1,112.85	
Kofoid, Orville, resident bridge engineer	3,062.92	12.05
Kondraski, Don, truck driver	807.70	
Koons, L. V., district maintenance superintendent	3,912.01	244.85
Kovach, George, laborer	762.26	
Kovtynovich, John, material inspector	90.00	
Kraber, Chas. H., material inspector	200.00	.95
Kraft, Walter C., office assistant inventory survey	53.33	
Kraule, Fred, laborer	146.33	
Krause, Adolph, laborer	6.30	
Krebs, Dorothy, stenographer	1,578.27	
Krehbiel, Homer, office assistant inventory survey	30.00	
Kron, E. V., paint machine operator	2,084.55	
Krueger, W. G., general bridge superintendent	4,392.38	134.90
Kruse, Geo., grader operator	161.55	
Kudrna, Don, grader operator	404.35	
Kuiper, Bill, truck driver	1,764.35	
Kvavle, Carl, laborer	1,349.00	
Loam, H. V., truck driver	1,978.05	
La Du, Geo., laborer	390.15	
La Fountaine, Cliff, material checker	20.00	
La Grander, C. G., truck driver	1,975.60	2.90
Laing, Charles, laborer	39.15	
Lakey, E. H., laborer	1,794.15	
Laman, A. V., laborer	2,107.65	
Lamb, Earl, laborer	860.95	
Lambert, Bob, laborer	948.50	
Lambert, Eldon, partyman—traffic survey	66.00	15.80
Lambrecht, Joseph, laborer	49.50	
Lancaster, S. C., foreman	1,840.00	
Lane, Leaman F., truck driver	98.19	
Lane, Vester, laborer	328.50	
Langrude, Ole, laborer	1,633.55	
Larsen, T. W., grader operator	1,939.80	
Larson, Chester, laborer	269.33	
Lathim, K. B., office clerk	3,190.21	29.90
Laughlin, C. M., laborer	1,720.80	2.40
Laughlin, Kevin, party chief—inventory survey	2,156.78	
Laughlin, Marshall, section helper	2,169.35	3.85
Laughlin, Robert, tapeman—inventory survey	192.00	*149.93
Lawrence, Eugene, laborer	48.00	

* Private car mileage.

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Laws, Robert M., material inspector	$ 92.68	$ .35
Laws, W. P., sectionman	2,461.26	.....
Lawton, R. R., truck driver	156.40	.....
Layton, Abb, laborer	1,725.15	.....
Layton, C. R., motor grader operator	94.41	.....
Layton, C. W., laborer	38.50	.....
Layton, Harold, boilerman	162.72	.....
Layton, John, laborer	45.00	.....
Layton, Theodore, grader operator	150.45	.....
Leach, Warren, section helper	1,825.95	.....
LeBlanc, A. L., foreman	2,477.82	.....
LeClair, Budd, laborer	779.88	.....
Ledgerwood, Orrin, laborer	89.10	.....
Lee, Harold E., office assistant inventory survey	122.58	.....
Leffler, Arthur O., truck driver	1,211.40	.....
LeGier, Lester B., laborer	1,425.50	.....
Lehman, Bill, bridgeman	928.35	.....
Lehman, Hal W., sign helper	857.63	.....
Leighty, Joy, sectionman	2,182.41	.....
Lemcke, Albert G., laborer	7.20	1.35
Lenz, C. H., kettleman	898.40	.....
Leonard, Wesley J., truck driver	2,002.65	.....
Lester, W. M., laborer	891.45	.....
Levenhagen, John, truck driver	1,750.20	.....
Levine, Oscar, gate tender	1,955.00	.....
Lewis, Dave J., office assistant inventory survey	76.67	.....
Lewis, F. R., section helper	2,162.54	.....
Lewis, Jack, truck driver	1,043.50	.....
Lewis, L. L., bridge inspector	3,560.86	39.90
Lewis, Marie B., stenographer	990.00	.....
Libby, H. W., chief locating engineer	5,772.92	482.65
Lind, George, laborer	69.90	.....
Lind, Henry, laborer	260.68	.....
Lind, John, laborer	67.50	.....
Lindbeck, Kathleen, revolving fund clerk	437.50	.....
Lindeblom, M. A., designer	3,254.79	.....
Lithgow, Wayne, sectionman	1,947.15	.....
Lockard, A. M., machinist	2,667.87	.....
Lockyear, W. L., assistant bridge foreman	2,712.50	.....
Loffer, Ronald R., motor grader operator	2,048.11	.....
Loganbill, D. N., truck driver	88.55	.....
Loggan, Harry, party chief—inventory survey	3,123.44	24.30
Loggan, Harry, party chief—inventory survey	.....	*4.50
Lonergan, James F., chainman	743.45	1.50
Long, C. C., bridge foreman	3,170.86	.....
Long, Willard W., watchman	1,733.70	.....
Loter, Kenneth, truck driver	749.72	.....
Louy, Ralph, laborer	166.20	.....
Love, Charles, pilot car driver	212.80	.....
Lovelace, Dennis A., material inspector	71.83	.....
Lovell, A. L., truck driver	117.98	7.80
Lovell, C. E., laborer	616.10	.....
Lovell, J. A., laborer	1,618.65	.....
Low, Chas. E., office engineer	4,907.10	.35
Lowe, Wilmer C., truck driver	1,984.13	.....
Lower, Ben, laborer	928.60	.....
Lowery, V. T., street inspector	2,076.85	.....
Lowther, J. A., flagman	384.46	.....
Lucas, Caroline, stenographer	2,322.91	.....
Lucas, F. E., laboratorian	120.83	.....
Lucas, P. A., material inspector	1,051.22	.....

* Private car mileage.

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Luckett, Harry, caretaker	$1,307.62	$
Lucy, Raymond, shoveler	109.18	
Luke, Joe, laborer	399.45	
Lumis, Selmer, laborer	18.00	
Lund, E., sign helper	74.67	38.60
Lund, Martin, laborer	1,798.20	
Lundell, Leon W., partyman—traffic survey	124.84	131.15
Lutz, L. O., sectionman	2,174.66	
Lyda, H. C., carpenter	2,412.48	2.75
Lynch, Virgil, laborer	97.65	
Lyons, Lester, bridgeman	2,044.45	
Lyons, Ralph, truck driver	1,467.45	.80
Lytle, K. D., division engineer	7,674.79	755.10
MacDonald, Arch B., chainman	1,242.79	16.10
Mackrodt, H. A., truck driver	90.75	
Macomber, C. A., sectionman	2,547.33	
Macomber, Nate, section helper	2,292.33	
Maddux, Geo., laborer	265.05	
Magee, W. J., truck driver	311.10	
Mahan, Clyde, chainman	2,320.00	
Main, L. S., section helper	1,995.13	
Maison, C. H., accountant	3,190.21	
Mann, B. M., assistant timekeeper	293.02	
Mann, H. S., material inspector	1,250.41	
Mann, M. H., truck driver	458.90	
Manning, C. L., officeman	2,584.11	
Manning, C. W., bridge foreman	3,039.24	
Manning, Don, assistant manager—traffic survey	2,868.75	551.00
Marchbank, F. B., assistant operator	3,000.00	
Marcott, Lynn, flagman	1,153.84	
Marcus, Marjorie, typist	620.59	
Markham, Ray, sectionman	2,162.26	
Marlton, Bob, tamperman	592.03	
Maronay, R., truck driver	1,753.52	
Marquis, Claude, street foreman	2,530.42	30.85
Mars, L. D., resident engineer	4,359.88	
Marshall, Charlie, laborer	135.50	
Martel, J., laborer	22.25	
Martin, B. A., locating engineer	4,884.12	36.45
Martin, Chas. A., partyman—traffic survey	121.94	37.15
Martin, Fred, laborer	1,017.23	
Martin, H., section helper	1,964.98	
Martin, John E., section helper	1,989.41	
Martin, L. M., man and team	707.10	
Martin, O. L., flagman	994.85	
Martin, Virgil, traffic recorder	10.80	*4.32
Martin, Wm. O., raker	1,013.68	
Martinak, Joe E., motor grader operator	2,141.50	
Martinak, J. G., sectionman	2,118.14	
Martindall, J. F., pitman	104.00	
Martinsen, John H., laborer	1,540.75	
Mascall, C. C., section helper	1,380.85	5.35
Mason, Draper C., chainman	462.07	
Mason, Harry, shoveler	727.33	
Mathews, Keith, laborer	52.50	
Mathews, Walter W., truck operator	554.84	
Mathis, Meda, punch machine operator	1,096.50	
Mattingly, A. L., laborer	1,439.40	
Mauch, Loren, motor grader operator	2,120.63	
Mauck, A. G., transit-rodman	2,601.43	17.35
May, V. E., truck driver	12.65	

* Private car mileage.

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Mayer, Clarence N., section helper	$2,296.76	$
Mayfield, C. H., laborer	1,627.67	
Maynard, C. O., foreman	2,778.50	2.30
Maynard, Maurice, mixerman	617 56	
Mays, Edwin, tapeman—inventory survey	210.00	199.88
McArthur, J. D., motor grader operator	2,100.80	8.50
McCallister, J. W., engineer draftsman	4,432 38	10.85
McCallister, M. D., right of way agent	3,927.57	1,099.40
McCann, E. W., computer	1,438.25	4.30
McCann, Lester, spotting foreman	357.35	
McCartney, R., bridgeman	2,081.95	6.20
McClain, H. E., sectionman	2,185.53	3.90
McClary, Charlotte, stenographer	1,594.84	
McClay, Taylor, truck driver	877.90	6.10
McCluer, D. F., laborer	1,605.80	
McClure, H. H., computer	2,121.55	
McComb, Oliver, section helper	2,001.11	
McCormack, Grant, truck driver	1,953.10	
McCullough, A. R., laborer	32.85	
McCullough, C. B., bridge engineer	6,352.53	302.40
McCullough, C. B., bridge engineer		*84.88
McCullough, J. R., chainman	145.16	
McCullough, L., tapeman—inventory survey	162 00	
McCumsey, H. L., laborer	1,713.80	
McCutcheon, Chas., sectionman	2,386.73	
McDonald, Bob, leverman	47.87	
McDonald, F. A., truck driver	371.55	
McDonald, Gerald, partyman—traffic survey	134.25	111.85
McDonald, K. M., jackhammerman	36.98	
McDonald, O. B., truck driver	25.85	
McDonald, R. H., truck driver	1,124.74	
McElfresh, Frank E., laborer	57.05	
McElvain, E. L., general foreman	3,931.93	
McFarland, James, chief clerk	4,171.43	20.20
McFarlane, R. T., material inspector	236.57	
McGahan, Al, truck driver	903.87	
McGahan, V., mechanic helper	2,423.37	94.55
McGee, J. F., transitman	3,420.01	4.90
McGee, Roy, sectionman	2,595.51	
McGetrick, Loyd, man and team	156.00	
McGinnis, Webb, sectionman	2,426.60	
McGowan, John, chainman	40.00	.80
McGreer, E. G., sectionman	1,806.94	
McGrew, F. O., computer	1,250.78	11.15
McHugh, D. D., truck driver	1,500.39	
McIntyre, R. B., laborer	182.70	
McIrvin, A. O., street inspector	2,209.92	4.00
McKenney, C. W., truck driver	215.30	
McKenzie, Chester, section helper	1,966.20	
McKenzie, D. F., section helper	2,150.78	
McKenzie, S. C., motor grader operator	2,159.52	
McKibben, F. H., laborer	841.28	
McKinley, Elgin, laborer	753.20	
McKinney, James, laborer	785.25	
McKinnon, Otis, sectionman	2,565.72	3.40
McKnight, J. H., section helper	1,423.95	
McLeod, T. A., material inspector	160.00	
McLeod, Walter, motor grader operator	1,980.81	
McManus, Albert, gate tender	94.60	
McMurren, J. S., surface foreman	2,210.00	
McMurren, S. A., flagman	225.35	

* Private car mileage.

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
McNeel, O., laborer	$ 476.10	$ .....
McNight, Chas., laborer	372 60	.....
McReynolds, L. J., officeman	2,606.77	.....
McReynolds, Ralph, bridgeman	2,229.46	.....
McTaggert, Francis, truck driver	252.86	.....
Meadows, Leo, truck driver	1,938.30	2.15
Means, J. W., laborer	150.83	.....
Meeks, Herbert, sectionman	1,898.40	.....
Meisel, C. C., resident bridge engineer	3,158.76	2.80
Melson, L. B., timekeeper	2,091.93	34.40
Melton, Harry C., surface foreman	2,781.47	29.80
Melton, L. R., truck driver	1,960.82	124.35
Melville, John O., captain	3,609.21	.....
Menear, Earl, truck driver	1,803.25	.....
Menegat, P. J., tapeman	1,767.32	.....
Mercer, F. E., invoice clerk	3,304.86	3.25
Merchant, Ivan D., assistant engineer grade A	4,640.00	.....
Merrick, Ivan, laborer	72.00	.....
Merrill, W. B., transitman	3,008.06	7.00
Merriman, Guy, laborer	792.45	.....
Mershon, Earl, inspector	2,571.61	12.70
Mershon, Earl, inspector	.....	*3.75
Mershon, J. L., chainman	883.87	.30
Mershon, L. J., bridge foreman	3,422.26	.....
Messenger, E. T., sectionman	2,335.77	.....
Messenger, Freeman, grader operator	2,017.40	6.85
Messinger, S. K., laborer	81.45	.....
Metcalf, Laurence, chainman	1,316.32	2.15
Metts, B. O., laborer	1,392.25	.....
Meyer, F. W., laborer	1,837.25	.....
Meyers, F. E., section helper	2,260.00	.....
Meyers, Robert L., laborer	8.00	.....
Meyers, Walter E., truck driver	57.75	.....
Michael, Ted, laborer	642.28	.....
Miles, Ross C., assistant cost analyst	2,826.65	329.27
Millard, S. G., sectionman	2,350.64	.....
Miller, B. C., laborer	28.00	.....
Miller, Chas., laborer	1,761.90	.....
Miller, C. S., mechanic	2,241.99	.....
Miller, Earl, truck driver	1,556.52	227.45
Miller, Ellis D., section helper	2,167.55	.....
Miller, Frederic, laborer	364.15	.....
Miller, Geo. V., street inspector	2,600.21	11.50
Miller, H. G., supervisor—inventory survey	4,572.14	53.35
Miller, Howard F., laboratory assistant	671.76	.....
Miller, H. E., truck driver	163.60	.....
Miller, H. R., sectionman	2,069.60	8.25
Miller, James, truck driver	883.60	.....
Miller, Jos., mechanic	2,533.16	26.10
Miller, Joseph E., flagman	430.45	2.50
Miller, J. G., sectionman	1,989.40	.....
Miller, Marvin E., truck driver	1,998.40	.....
Miller, M. L., truck driver	2,471.73	.....
Miller, Philip E., material inspector	1,119.19	1.45
Miller, Ralph T., section helper	281.40	.....
Miller, Victor B., material inspector	329.03	.....
Miller, W. W., bridgeman	1,031.90	.....
Miller, W. H., sectionman	2,556.81	.....
Millering, C. H., office clerk	3,190.21	46.40
Millett, Frank, yardman	2,268.13	.....
Million, C. L., tractor driver	1,992.48	4.70

* Private car mileage.

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Mills, Frank, truck driver	$ 870.99	$ .....
Mills, J. Emerson, laborer	284 85	.....
Milner, Morris H., office assistant	2,793.20	13.00
Miltenberger, H., section helper	1,337.35	.....
Miner, A., foreman	2,011.29	.....
Miner, Gilbert, park caretaker	208.00	.....
Minkiewitz, W. J., assistant real property officeman	3,351.35	.....
Minthorn, Walter, bridge foreman	3,422.26	.....
Minto, Harry, weight party chief	181.28	123.05
Miranda, H. J., welder	2,520.12	.....
Mitchell, Edwin, shovel operator	2,502 22	4.75
Mitchell, W. D., district superintendent traffic survey	172 02	115.36
Moffit, Carl, laborer	48.00	.....
Moffitt, V. L., general foreman	3,532.48	8.75
Mollinet, R. E., resident engineer	3,667.93	78.80
Mollar, E. R., Jr., rodman	174.19	.....
Monda, M. H., timekeeper	851.49	.....
Monner, H. A., laborer	277.15	.....
Monner, Wm. L., tapeman—inventory survey	368.38	2.37
Monner, Wm. L., tapeman—inventory survey	.....	*132.73
Monroe, Joe, truck driver	2,217.25	.....
Monson, Agnes, stenographer	2,046 45	.....
Monson, Ann, stenographer	30.00	.....
Moon, Harold, laborer	2,063.97	.....
Moon, Oris, laborer	1,989.81	.....
Moore, Arthur M., payroll checker	370.97	.....
Moore, Charles W., head chainman	2,384.96	.....
Moore, Donald, truck driver	691.24	.....
Moore, E. S., carpenter	2,557.70	.....
Moore, Frank, resident bridge engineer	4,684.96	7.10
Moore, Homer, laborer	800.65	.....
Moore, Hugh, truck driver	23.60	.....
Moore, J. C., material inspector	2,034.10	.....
Moore, M. W., bridge inspector	3,404.21	93.00
Moore, W. J., blademan	2,001.58	.....
Moorman, W. L., invoice clerk	3,078.53	.....
Morelock, J. E., draftsman	3,573.31	5.95
Morgali, Gladys, mimeograph operator	69.33	.....
Morgan, Frank D., draftsman	2,125.99	10.40
Morgan, H. M., laborer	417.00	.....
Morin, M. A., paintman	139.61	.....
Morisette, George, grader operator	1,759.63	.....
Morris, A. L., tapeman	66.00	.....
Morris, D. A., laborer	827.10	.....
Morris, Ellis L., materials checker	827.10	.....
Morris, H. G., section helper	1,948.45	.....
Morris, Jerry, truck driver	2,002.05	.....
Morris, Robert, laborer	93.25	.....
Morris, R. H., truck driver	423.00	.....
Morse, Gerald W., laborer	44.25	.....
Mortensen, Carl, bridgeman	1,737.03	.....
Moser, August, mechanic	2,355.31	.....
Mosher, J. L., laborer	128.25	.....
Mott, Guy H., working foreman	1,554.92	.....
Mowers, F. A., truck driver	1,143.02	.....
Muckridge, F. O., motor grader operator	119.86	.....
Mudd, C. R., clerk	3,190.21	.....
Mulkey, Chester, truck driver	1,255.43	328.65
Mullikin, Alvin, laborer	57.15	.....
Mumma, V. J., materials inspector	13.33	.....
Munhollon, Harold C., chainman	236.67	.....

* Private car mileage.

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Munn, Ralph O., grader operator	$1,937.88	$
Murphy, J. M., grader operator	762.77	
Mutchler, James, truck driver	588.55	
Meyers, Harley, truck driver	135.70	
Myers, Frank, laborer	89.25	
Myers, Fred J., computer	1,944.56	186.50
Myers, J. E., computer	3.080.58	
Myers, T. E., computer	1,218.02	
Nash, E. M., foreman	3,084.39	36.10
Nash, Floyd, grader operator	1,194.98	14.60
Nash, Jud, spot foreman	1,314.83	
Nash, J. W., office assistant	4,555.11	11.15
Neathammer, M. M., kettleman	79.00	
Neavoll, B. D., section helper	2,002.00	
Nedrow, Jess W., laborer	1,277.13	
Nedrow, L. H., caretaker	441.61	
Nelson, Frank, laborer	45.50	
Nelson, J. D., pay roll checker	1,282.26	
Nelson, S. H., computer	2,624.20	
Nelson, Ray, truck driver	131.90	
Nelson, Robert V., transit-rod	2,390.40	
Nelson, Ward, truck driver	1,644.05	
Nesbitt, Howard, laborer	25.75	
Neukirchner, Jim, grader operator	1,995.10	5.60
Newberry, Charles, flagman	463.08	
Newell, M. H., truck driver	901.25	
Newhouse, Darrell, bridgeman	52.80	
Newman, Bert, grader operator	483.40	
Newman, D. W., grader operator	83.50	
Newman, Fred L., shoveler	84.83	
Newman, W. H., bridgeman	1,935.11	
Newton, Glenville, truck driver	111.66	
Ney, W. H., clerk	3,384.95	
Nicholas, E., section helper	1,969.85	
Nichols, Fred, raker	1,391.49	
Nichols, J. K., laborer	220.83	
Nichols, Otis A., section helper	2,017.10	8.25
Nichols, R. J., serviceman	2,104.73	
Nickson, L. E., bridge foreman	3,182.26	2.80
Niemi, Dave, truck driver	1,913.15	
Niemi, Jack, section helper	1,996.76	
Nieswander, E. D., watchman	96.70	
Nieswander, Frank, mechanic's helper	2,236.79	
Niles, A. L., weight party chief	181.28	108.50
Niles, F. W., chainman	1,747.34	
Noah, Ben, truck driver	1,144.73	
Noble, Oren, laborer	208.80	
Noeske, Carl, chainman	2,314.00	3.60
Norberg, Oscar, chainman	200.00	2.80
Norby, A. W., machinist	2,754.04	
Nordyke, Homer, materials checker	46.67	
Norval, Clair, truck driver	202.65	3.40
Nunnenkamp, Lawrence, flagman	46.00	
Nute, R. F., laborer	253.25	
Nyhus, Ed., section helper	2,135.20	
Oakes, C. H., laborer	1,505.65	
Oakes, John R., tapeman	1,382.67	
Ober, Wesley, grader operator	103.80	
O'Brien, Ted, laborer	1,900.25	
O'Conner, F. J., chainman	253.33	.75
O'Dell, Ernest H., chainman	528.31	
O'Dell, H. E., motor grader operator	66.08	2.55

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
O'Dell, John, bridgeman	$2,040.10	$ 5.90
Odell, Rolland L., chainman	2,110.00	.....
Offill, Glen, laborer	59.95	.....
O'Guin, J. L., laborer	9.45	.....
O'Kelley, Mark, laborer	620.08	.....
Oldenburg, A. E., working foreman	2,389.51	.....
Oldenburg, Henry, mechanic's helper	2,331.50	.....
Oleson, Hans O., laborer	726.40	.....
Olmstead, D. D., fireman	2,428.05	.....
Olson, Chas., truck driver	974.25	.....
Olson, Ernest, stake artist	69.00	.....
Olson, Helmer, section foreman	2,599.32	.....
Olson, John, laborer	603.10	.....
Olson, Lou, spot foreman	523.33	.....
Olsen, P. J., working foreman	2,138.20	.....
Olsen, R. R., working foreman	1,978.96	.....
O'Neil, Chas. F., computer	2,500.20	.....
O'Neil, V. G., office assistant	4,009.23	.....
Ontko, Andy, laborer	584.10	.80
Oothings, Hendrick, office assistant	30.00	.....
Opedal, Tom, draftsman	3,434.86	.....
Oraw, Louise, clerk	1,913.67	.....
Ordway, Leo, surfacing foreman	408.60	.....
Orton, A. W., investigator traffic fines	.....	276.29
Orton, A. W., investigator traffic fines	.....	*95.48
Orvis, Geo. T., section foreman	2,551.50	.....
Osborn, C. H., tamperman	158.00	.....
Osborne, John, laborer	73.80	.....
Osbourne, Gregg, office assistant	76.67	.....
Otis, Ralph G., chainman	2,261.94	.....
Otley, Harold, laborer	156.00	.....
Ott, Joe, laborer	1,716.97	.....
Ott, R. G., laborer	166.51	.....
Otten, Geo. H., landscape engineer	2,494.50	314.00
Otterstrom, Albert, laborer	236.70	.....
Owen, Ben, laborer	246.15	.....
Owen, J. T., truck driver	67.00	.....
Owens, Ermal, storekeeper	4,162.87	.....
Pachmayr, Kenneth, laborer	62.00	.....
Page, James L., laborer	73.50	.....
Page, Loyal E., laborer	71.75	.....
Painter, Bob, rollerman	2,189.63	39.40
Painter, Walter, rollerman	72.28	.....
Palmer, E. E., truck driver	1,267.24	.....
Panger, Chas. A., materials inspector	132.26	.....
Paquette, W. J., section foreman	2,381.20	.....
Parberry, J., laborer	1,712.83	.....
Park, C. W., truck driver	1,405.93	.....
Parker, Alfred, grader operator	2,092.93	.....
Parker, C. W., right of way agent	3,477.57	841.78
Parker, J. M., stake artist	219.00	.....
Parkes, D. B., materials inspector	972.97	.....
Parks, E. S., section helper	1,234.28	.....
Parks, H. W., section foreman	2,359.16	4.30
Parmenter, Bud, carpenter	2,310.21	.....
Parson, A. F., bridge engineer	2,547.35	9.20
Parsons, L. E., assistant office engineer	4,790.74	.....
Parsons, Paul, truck driver	1,162.70	.....
Parton, A. B., section helper	2,096.45	.....
Partridge, Oscar C., chainman	132.26	.....
Patterson, J. B., section foreman	2,205.84	.....

* Private car mileage.

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Patton, Paul, truck driver	$ 895.36	$ .....
Patton, W. R., radio technician	320.23	.....
Paul, William H., auto economist	118.47	109.40
Paulas, Fred, watchman	1,213.26	.....
Paulson, C. E., street inspector	1,992.15	22.10
Paxson, G. S., acting bridge engineer	7,334.16	408.30
Paxton, F. D., tapeman	130.65	*106.58
Pierce, Roy, stockroom helper	2,158.28	.....
Pearl, John J., head chainman	1,392.35	.35
Pease, Ed, party chief	2,578.30	5.25
Peck, J. E., resident engineer	5,124.90	27.80
Peck, J. E., resident engineer	.....	*6.30
Pederson, H. A., mechanic	2,909.67	80.60
Peebles, F. M., laborer	1,717.80	.....
Peek, Norman, sign foreman	2,966.86	1,173.90
Peeples, Arthur, laborer	11.00	.....
Pell, Willard, laborer	54.45	.....
Pelton, W. R., bridgeman	2,301.08	.....
Pemberton, Rex, chainman	50.00	.....
Pence, E. M., chainman	374.19	.....
Pence, John, mixerman	1,904.06	.50
Pendleton, Harold S., tractor operator	1,904.15	.....
Pennell, H. C., truck driver	1,987.25	.....
Perkins, George N., laborer	637.55	.....
Perkins, Stanley, bridgeman	1,975.65	.....
Perkins, V. E., bridge foreman	3,604.21	4.80
Perkins, W. G., bridge foreman	3,604.21	.....
Perrin, John L., rodman	1,436.08	.....
Perry, Jasper, computer	2,924.08	.40
Peters, C., bridgeman	2,282.88	.....
Peters, K. W., laborer	1,642.43	.....
Peterson, Antone, laborer	192.60	.....
Peterson, Bruce, truck driver	147.53	4.35
Peterson, Carl, shoveler	109.45	.....
Peterson, Carl A., resident engineer	5,124.90	7.80
Peterson, E. N., street inspector	26.76	3.00
Peterson, Fred, watchman	2,000.25	.....
Petry, Wm., laborer	927.78	.....
Pettijohn, J. M., axeman	537.10	.....
Pettijohn, N. W., computer	2,172.69	2.15
Peugh, Vern R., mechanic	314.90	.....
Pfifer, C. E., draftsman	3,716.19	175.75
Phelps, J. A., locating engineer	4,478.51	334.85
Philbrook, George, laborer	75.75	.....
Phillips, Paul, truck driver	1,909.15	.....
Phillips, Tracey, laborer	1,728.50	.....
Phillips, Walter, timekeeper	310.49	.....
Phipps, Chas., chainman	1,281.05	.....
Pickett, Earl, tapeman	228.00	18.82
Pickett, Earl, tapeman	.....	*192.63
Pillette, Marden T., laborer	239.40	.....
Pinkstaff, K. A., laborer	535.25	.....
Piper, T. R., bridgeman	2,236.59	.....
Pittman, Dale, pilot car driver	66.25	.....
Pittman, Donald, truck driver	89.10	.....
Pittman, Fred L., section foreman	2,315.53	.....
Pittman, J. R., grader operator	89.09	.....
Pointer, George, lineman	859.27	.....
Pool, Arthur, truck driver	1,949.55	.....
Pope, Ivan, bridgeman	1,769.18	.....
Porter, R. L., transitman	3,330.16	.....

* Private car mileage.

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Posey, Lester, laborer	$ 208.45	$ .....
Potter, Dorothy, stenographer	600.00	.....
Potter, L., bridegman	118.80	.....
Pound, Hubert, section foreman	1,833.65	.....
Pranger, H. H., motor grader operator	2,351.48	.....
Pratt, Norman, chainman	2,126.00	.....
Presley, Austin, laborer	1,727.10	.....
Presley, Clifford, laborer	726.30	.....
Price, Carl, section helper	2,179.50	.....
Primm, Linsey, truck driver	277.77	.....
Probert, S. H., office engineer	8,437.24	11.10
Prock, Vernon, truck driver	796.00	.....
Prout, Roy, section helper	2,013.35	.....
Purney, J. J., chainman	2,225.58	16.10
Pursley, C. W., laborer	254.49	.....
Puter, C. S., paintman	448.13	.....
Putman, Alice, stenographer	2,885.59	6.55
Putman, Glenn, man and team	180.00	.....
Putman, Joe, section foreman	2,450.63	.....
Query, Floyd, clerk	3,190.21	.45
Query, Henry, timekeeper	1,599.39	227.85
Quigley, Evert, flagman	1,191.77	.....
Quint, Margaret, stenographer	941.69	4.25
Rabens, Elmer, sign helper	1,299.08	727.10
Ralph, Charles, laborer	254.70	.....
Ramage, Percie, laborer	50.85	.....
Ramsden, C. H., materials inspector	1,194.43	.....
Ramsey, C. R., boilerman	522.43	.....
Ramsey, Leonard, section helper	1,840.37	.....
Randall, Conley, laborer	463.30	.....
Rands, Royal, caretaker	140.00	.....
Rankin, Maxine, typist	940.64	.....
Rassmussen, Donald, laboratory assistant	2,710.29	.....
Rau, Fred, mechanic's helper	2,065.64	15.55
Rawls, Grady, truck driver	363.15	.....
Rawson, Fred, bridge inspector	1,115.44	3.35
Rawson, Fred, bridge inspector	.....	*50.40
Read, G. C., section foreman	2,508.54	.....
Redding, Mike, laborer	604.26	.....
Redman, Arley G., shovel operator	1,705.67	6.25
Redman, J. A., draftsman	3,305.87	.....
Reed, Leo V., computer	2,829.26	.....
Reed, Paul, street inspector	2,376.12	.....
Reeder, Harry B., levelman	3,112.88	9.00
Reeder, John, truck driver	1,900.20	9.00
Reeder, Lock M., lineman	1,236.44	.....
Reeder, Lyle, spot foreman	220.12	.....
Rees, Jack, laborer	276.40	.....
Reeves, Dorsey, clerk	2,966.86	.....
Reeves, Myrtle, stenographer	2,322.91	.....
Reeves, W. A., office engineer	5,471.42	167.00
Rehburg, A. G., laborer	149.00	2.10
Reif, Ed. J., inspector	216.15	.....
Reisner, R. H., transitman	3,117.18	13.75
Relling, L. W., laborer	28.00	.....
Remington, Claude, truck driver	84.75	.....
Remington, C. J., laborer	1,079.20	.....
Remington, R. W., requisition clerk	3,522.65	1.80
Renken, Eddy, laborer	15.00	.....
Repsleger, Julius, laborer	252.00	.....
Revell, Russell, materials inspector	20.00	.....

* Private car mileage.

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Reynolds, E. B., sign helper	$1,840.00	$ 554.60
Reynolds, Marion E., stake artist	750.00	2.00
Reynvaan, Arthur, laborer	100.80	.....
Rheinsburg, Robert, tender driver	685.29	.....
Rhodes, John, raker	2,050.97	.....
Rice, Roy, Jr., magnet driver	458.58	258.80
Richards, Wilbur H., office assistant	53.33	.....
Richards, Sidney, rollerman	35.11	.....
Richardson, Truman A., kettleman	651.90	.....
Richardson, Claude A., materials checker	851.61	3.00
Richardson, C., axeman	127.74	.....
Richardson, Edward H., chainman	167.74	.....
Richardson, Elbert E., truck driver	1,795.05	.....
Richardson, Erwin, laborer	73.35	.....
Richardson, Floyd, truck driver	1,812.70	2.65
Rickett, Earl, laborer	118.80	.....
Ricketts, E. G., bridge testing engineer	5,198.12	639.75
Rickey, Esther M., stenographer	2,425.44	.....
Richa, Charles, laborer	77.50	.....
Rierson, Henry, chainman	56.23	.....
Riggs, Lois, telephone operator	1,664.55	.....
Riley, James, laborer	1,670.75	.....
Riley, Lester, laborer	114.75	.....
Rippie, Oscar, grader operator	1,706.65	.....
Risen, Edward, tapeman	192.00	*105.97
Risley, J. F., Jr., timekeeper	1,871.98	.....
Ritchie, Florence, stenographer	1,800.00	.....
Ritchie, Norman, tamperman	179.88	.....
Roake, Theo. C., designer	3,927.57	25.40
Roark, Wm., section helper	1,903.14	.....
Roark, W. D., truck driver	1,962.12	2.00
Roberts, A. V., section helper	1,579.42	.....
Roberts, Geo., truck driver	1,697.39	29.60
Roberts, Glenn E., resident engineer	5,124.90	.....
Roberts, John, laborer	1,938.61	.....
Roberts, Kenneth C., party chief	3,588.39	.....
Roberts, S. W., lineman	1,313.91	.....
Roberts, Walter, laborer	393.30	.....
Robertson, Carl, laborer	463.95	.....
Robertson, C. G., raker	828.19	.....
Robertson, James, section helper	2,087.90	8.45
Robertson, James J., materials inspector	26.67	.....
Robertson, L. E., section foreman	2,555.01	.....
Robertson, Paul, section foreman	2,359.48	.....
Robinson, J., laborer	368.15	.....
Robley, Grant, supervisor	95.74	9.30
Robley, Grant, supervisor	.....	*98.60
Rockafford, A. W., section helper	2,068.93	.....
Rodabaugh, H. W., truck driver	1,207.55	.....
Rodgers, Dan C., laborer	506.42	.....
Roe, Clarence L., tractor operator	315.65	.....
Roemhildt, W. H., bridgeman	1,463.65	.....
Rogers, George, laborer	2,000.30	.....
Rohrbough, Darrel D., transitman	3,269.47	39.15
Roland, George, section foreman	2,571.69	.....
Roles, R. J., chainman	2,432.49	.....
Roper, Earl, watchman	462.44	.....
Roscoe, Albert, watchman	431.62	.....
Rose, Ann, stenographer	1,198.07	.....
Rosebraugh, V. H., chainman	90.00	.....
Rosecrans, M. H., clerk	2,320.00	.....

* Private car mileage.

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Rosecrans, Richards, resident engineer	$3,647.86	$
Ross, Alvin C., supervisor	371.88	115.15
Ross, C. B., raker	1,425.49	
Ross, Fred, truck driver	372.71	
Ross, G. W., division office engineer	4,100.15	
Rother, Geo., welder	2,561.21	.35
Roundtree, Frank, truck driver	426.55	
Rouse, S. T., laborer	32.40	
Rowell, Theodore E., tractor operator	94.00	
Rubble, Zelle, secretary	1,149.95	19.35
Rudin, John, materials inspector	95.91	.35
Ruffner, Florence, stenographer	354.31	
Ruggles, Chas. A., laborer	467.25	
Rullman, Chas., right of way engineer	4,385.87	
Rupert, Ethel, stenographer	2,787.13	
Rupert, H. B., inspector	2,374.41	1.05
Russell, S. C., laborer	65.65	
Rutherford, Harry W., chainman	63.33	
Rutledge, Joe, chainman	236.67	
Sacre, Lyle, bridgeman	2,157.62	
Saling, Earl F., engineer's assistant	3,210.93	
Salmon, J. B., bridgeman	2,088.23	
Sanders, E., laborer	1,080.95	
Sanders, W. E., traffic counter	106.80	48.31
Sanwick, Andy, laborer	923.05	
Sapp, H. T., man and team	355.20	
Sause, Curtis, laborer	65.50	
Sawyer, John, laborer	811.87	
Say, Harold B., manager tourist department	2,720.56	207.40
Sayrs, Lamer, laborer	111.15	
Scarbrough, Roy, section foreman	2,186.38	4.70
Schannep, C. I., flagman	45.00	
Schannep, I. M., title examiner	4,907.10	471.80
Schertenlieb, Ed, section foreman	2,357.07	
Schevenius, Rudolph, tractor operator	1,858.69	
Schlegal, Sam, raker	1,555.45	
Schmid, C. E., levelman	122.73	
Schmidt, Frank, section foreman	2,437.02	
Schneberk, M., raker	1,361.13	
Schneider, C. C., designer	3,927.57	
Schoppert, Geo., grader operator	1,949.79	
Schoppert, Guy, raker	1,621.31	
Schram, F. F., storekeeper	2,689.11	
Schriver, A. R., chainman	1,398.54	.50
Schroeder, H. A., tapeman	171.29	*138.40
Schultz, Ed, laborer	166.50	
Schwering, W. E., section foreman	2,507.31	
Scobee, T. E., laborer	512.00	
Scofield, Willard J., chainman	989.90	90.96
Scarby, R. L., laborer	22.50	
Scott, Dan E., grader operator	1,759.88	8.45
Scott, Hugh, laborer	713.05	
Scott, J. H., resident engineer	5,124.90	
Scroggins, Ray K., rollerman	306.69	6.90
Scull, W. C., transit-rod	2,315.33	
Seals, W. O., truck driver	138.88	
Seamon, Owen, street inspector	2,633.19	18.45
Searle, Mable, stenographer	226.67	
Seeley, C. C., resident engineer	5,124.90	256.00
Seeley, Harry, laborer	325.35	
Sehon, J. J., Jr., stenographer	178.06	

* Private car mileage.

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Sellers, Joe, fireman	$2,464.37	$
Sellers, Roy C., storeman	2,084.28	
Sellers, Victor, truck driver	149.40	
Sessine, Isabelle, stenographer	1,257.10	
Shannon, Eldon, truck driver	142.20	
Shannon, Norval, laborer	148.10	
Sharinghouser, L. T., materials inspector	1,101.48	1.00
Shaver, B. W., laborer	1,677.55	
Shaw, A. C., chainman	1,396.77	
Shaw, Lloyd P., draftsman	3,191.47	3.65
Shea, Robert J., materials inspector	370.97	
Shearer, Andrew, laborer	6.30	
Shearer, C. R., truck driver	283.74	
Sheets, Graham H., laborer	682.40	
Sheldon, Clarence E., truck driver	171.03	
Sheldon, E. R., truck driver	1,496.74	14.45
Sheldon, H. G., mixerman	1,019.51	
Shelton, F. R., laborer	62.10	
Shelton, Geo. H., working foreman	2,222.87	
Shepflin, J., section helper	1,894.94	
Sherman, Clyde, office assistant	76.67	
Sherman, Peter, laborer	64.25	
Sherrett, V. C., bridge foreman	3,422.26	
Shields, Charles, truck driver	47.00	
Shields, L. S., designer	3,927.57	
Shields, V. E., grader operator	1,100.40	
Shillock, Frank F., density counter	127.74	56.25
Shillock, Frank F., density counter		*56.44
Shinkle, Frank, section helper	2,149.05	
Shinn, L. E., serviceman	2,179.95	
Shipley, Kenneth, section helper	1,535.49	
Shively, E. J., leverman	123.51	
Shively, Glen, laborer	151.00	
Shobar, Philip, mechanic's helper	2,106.02	
Shockley, Oscar L., tapeman	1,447.52	1.00
Shough Guy, sign foreman	2,966.86	1,244.90
Shough, L. D., section helper	2,032.35	
Shroyer, Cecil, section helper	2,021.13	
Sibray, Edgar E., party chief	969.36	44.15
Siegmund, W., sign helper	1,211.26	315.60
Sijota, Frank, bridge operator	2,151.18	
Silhavy, Chas. F., watchman	113.64	
Sills, M. B., traffic survey	127.74	36.35
Sills, M. B., traffic survey		*52.80
Sim, H., mechanic	2,711.21	89.40
Sim, Tom, foreman	3,574.14	56.45
Simmonds, R. G., laborer	22.75	
Simmons, H. V., inspector	1,554.62	4.50
Simmons, O., laborer	1,243.20	
Simms, S., draftsman	2,501.83	
Simon, Floyd H., carpenter	2,486.06	
Simons, Carl, laborer	47.00	
Simpson, E. E., laborer	140.85	
Simpson, H. B., draftsman	3,135.91	
Simpson, Kirk, computer	3,194.07	
Simpson, Paul, clerk	2,623.68	2.50
Simpson, Rockwell, inspector	2,595.97	3.80
Simpson, R. L., laborer	123.20	
Simpson, Tom, shovel operator	1,214.32	
Simpson, W. E., boilerman	120.71	
Sims, Paul, truck driver	148.98	

* Private car mileage.

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Sinclair, Hugh, truck driver	$1,999.03	$ 3.25
Sipperell, Ralph, draftsman	3.507.83	11.55
Skaggs, I. E., mechanic	1.631.74	.....
Skelley, E. A., chief draftsman	6.018 62	11.45
Skelton, A. G., project engineer	5,497.31	420.75
Skelton, J. T., resident engineer	4,739.07	14.05
Skiba, Frank, truck driver	1?9.98	.....
Slack, Addison W., laborer	573.30	.....
Slavens, C. C., resident engineer	4,739.08	1.35
Sloat, J. W., bridge inspector	874.16	3.05
Sly, George T., laborer	164.70	.....
Slyter, Mitchell, laborer	198.45	.....
Small, Estel, burnerman	101.59	.....
Small, Geo., motor grader operator	2,046.02	.....
Smith, Calvin M., truck driver	184.00	.....
Smith, Carl F., auditor	5.044.90	.....
Smith, Chas. A., shovel operator	2,269.13	.....
Smith, Donald L., laborer	367.29	.....
Smith, D. R., resident engineer	5,693.20	.....
Smith, Ed E., grader operator	843.26	.....
Smith, Elton, section foreman	2,092.40	.....
Smith, E. T., truck driver	421.85	.....
Smith, George, section foreman	2,007.19	.....
Smith, H. G., construction engineer	8,437.24	843.05
Smith, H. W., truck driver	201.70	.....
Smith, John J., laborer	992.88	.....
Smith, J. D., grader operator	1,927.?5	.....
Smith, Lee, truck driver	1,877.75	.....
Smith, L. R., surface foreman	956.93	14.25
Smith, L. S., laborer	648.93	.....
Smith, Malcolm, materials inspector	61.02	.....
Smith, Owen E., party chief	1,467.94	9.70
Smith, Robert M., truck driver	28.75	.....
Smith, R. J., electrician	2,876.98	.....
Smith, R. M., supervisor inventory survey	3,897.32	171.05
Smith, R. W., laborer	5.00	.....
Smith, Virgil, laborer	48.75	.....
Smith, Walter R., truck driver	1,940.00	.....
Smith, Wm., bridgeman	1,348.45	.....
Smitton, L. C., assistant engineer	4,465.88	1.00
Smouse, K. J., materials inspector	40.80	.25
Snedeger, Charles B., section foreman	2,127.10	.....
Snyder, Raymond, laborer	1,865.30	1.85
Soleim, Harold G., section foreman	2,428.44	.45
Solomon, Vernon, grader operator	1,164.15	.....
Sonner, Bill, machinist	2,665.84	.....
Sorensen, Ed, grader operator	1,334.30	.....
Sothman, Geo., district maintenance engineer	5,124.90	188.13
South, Raymond E., laborer	95.85	.....
Southwick, F. B., man and team	156.00	.....
Spagle, L. A., caretaker	354.30	.....
Spagle, Ray, truck driver	435.90	.....
Speaker, C. B., resident engineer	3,631.81	13.85
Spencer, A. W., rodman	1,232.08	17.65
Spencer, Roy, chainman	1,296.07	.....
Sperling, A. L., flagman	264.12	.....
Spinney, Art, retort operator	1,439.92	2.50
Spooner, Harold L., draftsman	1,426.04	2.95
Sporup, Walter, laborer	6.25	.....
Springer, Chester G., laborer	348.30	.....
Spurlock, Milton, grader operator	988.65	.....
Stamper, Claude, section foreman	2,403.43	.....

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Stanbrough, George K., chainman	$2,142.16	$ 27.70
Standley, Thomas, watchman	674.20	
Standley, Wayne, rollerman	173.91	
Stankavich, M. W., truck driver	1,748.25	
Stanley, Robert T., designer	3,684.21	
Starkey, F. A. foreman	3,591.47	25.65
Starr, Neil, truck driver,	2,011.85	
Starrett, James, laborer	506.35	
Stecker, Roy, laborer	216.00	
Steelhammer, C. G., materials checker	154.84	
Steenson, P. N., section helper	1,871.60	
Steeprow, Harvey, truck driver	1,738.75	
Steinbeck Fred K., grader operator	1,795.25	
Steinhauser Chas., truck driver	1,816.76	3.50
Stenlake, Wallace S., partyman	121.94	97.75
Stephenson, L. P., mechanic	745.57	1.00
Stephenson, M., bridge construction engineer	5,502.02	1,014.60
Stepp, F. H., truck driver	72.33	
Stevens, M. A., truck driver	1,916.50	
Stevenson, Earl L., party chief	628.74	
Stevenson, Frank, carpenter	2,252.48	
Stewart, I. N., stockkeeper	3,351.35	
Stewart, Milo, chainman	1,928.22	13.40
Stewart, Rudolph, tractor operator	1,966.10	
Stewart, W. H., resident engineer	5,124.90	66.85
Stiffler, W. W., assistant maintenance engineer	5,489.45	489.85
Stobie, J. T., laborer	1,817.95	
Stoddard, Carl, truck driver	169.95	
Stoddard, C. F., truck driver	1,173.52	
Stoddard, Hugh, laborer	1,131.88	
Stoddard, Wm. L., laborer	25.00	
Stokes, Homer T., grader operator	1,925.50	
Stone, G. A., truck driver	199.10	
Stone, Henry, laborer	1,182.43	
Stoner, Geo. B., bridge operator	3,360.00	
Stouder, C. H., grader operator	2,071.10	
Stough, Ed., section helper	2,298.03	
Stout, Chas. R., laborer	252.00	
Stout, John R., head chainman	1,400.37	
Stoutt, Paul, section foreman	2,024.68	
Stader, A. J., section foreman	2,043.60	
Stradley, Leroy, computer	2,489.00	
Stratton, L. M., clerk	2,798.40	
Stream, E. E., clerk	3,190.21	13.40
Stream, H. E., laborer	59.85	
Stretch, V. P., carpenter	2,382.13	
Stretch, W. R., timber inspector	2,793.67	
Strobel, Bill, truck driver	1,797.06	
Stroberg, Frank, grader operator	1,962.10	
Strohmeyer, W. M., district maintenance superintendent	5,124.90	208.95
Struble, Gertie, stenographer	2,323.84	
Stryker, W. R., spot foreman	552.55	
Stuart, C., welder	2,540.78	4.25
Stults, Fred, section foreman	2,345.02	
Stults, W. C., tractor operator	100.30	
Stump, Mitchell, chainman	2,239.96	2.00
Stumpenhaus, L., sign helper	1,840.00	1,117.70
Sturgis, Harry R., chainman	779.35	19.60
Sullivan, Ed, mechanic's helper	2,197.14	
Sullivan, Frank, section foreman	2,375.38	
Sullivan, L., head chainman	1,929.56	7.00
Sumpter, Ira, flagman	88.50	

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Sutherland, Geo. A., foreman	$2,264.40	$
Sutherland, Jess W., grader operator	310.69	
Svatos, Joe, surfacing foreman	2,051.24	
Swacker, W. R., laborer	1,666.55	
Swart, H. S., resident engineer	2,709.07	
Swift, Dean, resident engineer	4,751.55	72.40
Swift, Harold, laborer	322.29	
Switzer, E. A., truck driver	400.21	
Talbott, C. V., mechanic	2,367.44	
Talbott, E. A., truck driver	1,601.10	15.95
Talbott, H. V., leverman	1,357.46	3.90
Talbott, William E., laborer	299.90	
Tandy, C. W., computer	2,759.40	
Tanner, Dewey, laborer	68.40	
Tatone, Joe, pitman	123.50	
Taylor, Bert, laborer	156.60	
Taylor, Clair, laborer	275.75	
Taylor, D. B., stockman	2,196.22	6.80
Taylor, H. L., laborer	196.20	
Taylor, L. V., J. H. man	2,009.45	17.20
Taylor, Paul, laborer	1,337.75	
Taylor, Sam, section foreman	2,195.45	
Taylor, Wayne, sign shop foreman	2,583.98	
Taylor, Wilson, laborer	48.00	
Teague, Fred, laborer	1,728.93	
Teel, H. M., resident engineer	3,704.49	12.95
Teel, H. M., resident engineer		*101.10
Terry, Allen, chainman	233.33	
Terry, William O., shovel operator	2,500.02	5.85
Tesdahl, Karl, chainman	383.98	
Tewinkel, Maurice, tapeman	255.00	*145.15
Tharp, A. J., mechanic	2,380.70	40.70
Tharp, O. J., mechanic's helper	2,004.76	
Theilen, Louis, carpenter	2,421.54	
Thielsen, Hans, paint machine operator	1,817.57	
Thiessen, Ernest, laborer	43.50	
Thissell, Henry, laborer	1,627.20	
Thomas, Carl F., section foreman	1,940.37	
Thomas, C. E., labortorian	120.83	
Thomas, Edward J., laborer	36.00	
Thomas, Herbert, pitman	270.26	
Thomas, John A., section foreman	2,569.26	
Thomas, R. W., chainman	1,590.35	10.00
Thompson, Alexander, materials checker	1,469.11	
Thompson, C. E., head chainman	374.82	3.35
Thompson, Earl N., computer	1,342.46	
Thompson, F. D., draftsman	3,444.83	147.25
Thompson, J. R., laborer	1,827.15	
Thompson, Tabb, transitman	3,296.54	
Thornton, Chas., stockman	2,029.11	
Thorpe, Chas. A., laborer	1,527.15	
Thorpe, Vernon, transitman	2,718.04	
Tichenoi, Robert, truck driver	1,815.15	
Tilley, George, section helper	1,999.65	3.50
Tilton, Charles S., office assistant	30.00	
Timeus, H., truck driver	1,840.45	
Todd, Lloyd, leverman	293.01	
Tolvstad, Lester, rollerman	1,808.26	
Tomlinson, Carl, office assistant	76.67	
Tomlinson, Jack A., party chief	209.54	*28.36
Toney, James, section helper	1,887.63	

* Private car mileage.

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Tonkin, Gordon K., axeman	$ 351.29	$
Toole, Jos. G., district maintenance superintendent	5,124.90	243.66
Toole, Nicolle A., resident engineer	3,825.71	4.50
TouVelle, F. L., commissioner		178.90
Townsend, Watson, office engineer	4,739.07	18.90
Trask, Donald, truck driver	55.05	
Travess, John, laborer	1,759.24	
Tresham, Harry, laborer	1,359.90	
Troutman, A. E., truck driver	1,457.51	1.50
Trueax, Wm. H., laborer	1,948.60	
Trueman, Frank E., laborer	1,772.00	
Trueman, G. H., laborer	1,379.53	
Truelove, E., surfacing foreman	2,056.22	2.50
Truelove, Rex L., leverman	87.03	
Tucker, Guy, pay roll checker	336.67	
Tucker, J. P., foreman	307.35	
Tucker, Edward R., density counter	127.74	
Tucker, J. F., pitman	351.25	
Tucker, Loren, truck driver	1,797.40	
Tucker, Monroe, laborer	611.10	
Tucker, Vernon, truck driver	1,922.01	
Ulrich, Russell, stake artist	48.00	
Umicker, Sam, laborer	18.90	
Umphlette, E. E., locating engineer	4,973.03	2.85
Unger, Jack, truck driver	1,140.87	
Uppendahl, Walter, mechanic	450.27	
Urlaub, Clara, typist	1,420.00	
Vagt, Robert, bridgeman	262.80	
Valade, Earl C., chainman	785.16	3.25
Vandehey, W., laborer	1,120.58	
VanDoren, C. G., section helper	2,142.09	
VanEmon, Carl, chainman	30.00	
VanGilder, D. A., laborer	1,243.45	
Van Horn, Geo. W., blacksmith	2,594.97	
Van Horn, Norman, truck driver	626.13	
Vann, J. W., laborer	88.20	
Van Orden, W. L., truck driver	706.25	
Van Osdol, Dale, laborer	266.80	
Van Schaick, I. J. W., foreman	3,104.91	7.60
Van Scoy, Paul, manager inventory survey	5,468.06	204.00
Varner, George, tractor operator	59.00	
Varner, W. H., truck driver	375.74	
Varnum, Dick, laborer	2,063.64	
Varty, Orville H., office assistant	30.00	
Vaughn, Eldon G., truck driver	99.95	
Vaughn, R. C., section foreman	2,546.95	1.85
Versteeg, Chas., bridgeman	457.10	
Vest, Rodney, laborer	80.00	
Vester, A. C., computer	2,591.23	
Vicars, B. R., truck driver	846.72	
Vicars, E. R., laborer	1,715.75	
Vincent, A. C., computer	2,955.16	41.40
Vincent, Wayne, section helper	2,180.37	
Vinson, A. G., clerk	2,689.11	
Voight, Fred, truck driver	2,042.60	
Volz, J. H., truck driver	1,892.35	
Waddell, C. L., laborer	452.78	
Waddell, Oscar H., retort operator	1,178.93	
Wagers, Vicar, truck driver	110.83	
Waggoner, F. E., transitman	3,353.31	15.35
Waggoner, O. L., section foreman	2,332.03	
Wagner, C. L., mechanic	2,458.75	

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Wagner, C. R., transitman	$3,286.49	$ 1.00
Wahl, Arthur C., axeman	469.26	
Walden, Floyd, laborer	805.50	
Walker, Charles J., laborer	2,091.30	
Walker, Jack, laborer	30.00	
Walker, John, laborer	69.25	
Walker, J. D., district maintenance superintendent	2,682.13	261.70
Walker, J. F., raker	2,004.82	
Walker, Murray, laborer	303.30	
Walker, Noble A., laborer	151.65	
Walker, S. C., sign painter	1,868.41	236.40
Wall, H. V., tapeman	180.00	148.28
Wallace, Alvin, party chief	2,444.31	30.35
Wallace, F., laborer	1,103.30	
Wallace, G. E., laborer	66.60	
Wallace, L. T., mechanic	2,705.52	6.75
Wallberg, Robert C., office assistant	76.67	
Waller, J. F., locating engineer	5,124.90	143.35
Walley, H., powderman	911.82	
Waln, Kehne, inspector	1,185.25	31.55
Walsh, Angus, chainman	1,159.32	
Walsh, R., district maintenance superintendent	5,124.90	262.40
Walters, R., laborer	323.33	
Walters, S. F., resident engineer	4,022.23	27.60
Walton, E. A., grader operator	1,950.30	
Walton, Howard, truck driver	48.95	
Walton, James J., officeman	3,523.54	27.70
Walton, J. L., laborer	890.70	
Waltz, Merle, pilot car driver	65.75	
Wanless, R. A., resident engineer	2,925.59	
Ward, V. L., grader operator	1,980.05	
Warfield, L. H., transitman	3,408.56	6.85
Warner, Earle, section helper	1,973.45	
Warner, J. L., truck driver	313.62	
Warren, Gordon L., flagman	525.48	
Warren, Marvin H., section helper	2,246.06	
Warren, Vernon, chainman	526.67	
Waterhouse, J. E., draftsman	3,050.00	1.50
Waters, Charlie, laborer	453.50	
Watson, Floyd E., truck driver	651.70	
Watson, James J., laborer	108.00	
Watson, L. P., laborer	1,812.35	
Watts, Alvin C., laborer	394.00	
Way, Floyd, laborer	24.30	
Weaver, A. J., flagman	249.15	
Weaver, J. B., locating engineer	4,884.12	64.60
Webb, Tom, laborer	1,174.43	
Webber, Ray, labor register engineer	4,348.30	504.70
Weber, J. A., designer	4,681.18	22.50
Wechter, W. H., transitman	3,531.15	5.15
Weckman, Theo, mechanic	2,302.69	
Weedmark, Cecil E., laborer	2,068.43	
Weirauch, John, tapeman	631.09	*206.23
Welch, Anona, stenographer	2,215.20	
Welch, Pauline, stenographer	2,782.71	
Wells, John, section helper	2,071.60	
Wells, O. A., laborer	1,158.93	
Welsh, Chas., truck driver	1,094.58	
Welsh, Fred, section foreman	2,198.36	
Welsh, Sam, truck driver	1,414.95	
Wenderoth, George J., party chief	427.51	48.42

* Private car mileage.

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Wenderoth, George J., party chief	$	$ *178.18
Wendling, J. H., leverman	85.94	.....
Wentz, Stanley, party chief	82.12	.....
Werner, Eugene, truck driver	398.90	.....
Werner, Maurice, painter's helper	1,947.88	.....
Wessell, Louis, laborer	25.20	.....
West, Myles, laborer	73.50	.....
Weston, Paul, raker	888.97	.....
Weston, Virgil, laborer	92.25	.....
Whaley, Frank, truck driver	1,299.14	.....
Whaley, Oness, rollerman	1,737.56	.....
Wheatley, Robert, laborer	1,264.91	.....
Whitcomb, Edward H., shoveler	1,674.90	.....
White, D. E., mixerman	1,431.72	.....
White, Ira W., party chief	310.52	15.10
White, Ira W., party chief	.....	*90.20
White, Lester, truck driver	1,917.03	.....
White, Lloyd, laborer	45.45	.....
White, O. A., laboratory assistant	1,220.85	.....
White, Paul C., truck driver	1,924.90	.....
White, Rodney, section helper	2,000.95	6.65
Whiteis, Paul, laborer	321.20	.....
Whitmore, P. P., locating engineer	5,124.90	.....
Whitseth, J. F., flagman	111.25	.....
Whittemore, Frank, machinist	2,597.39	.....
Wickham, George E., laborer	65.75	.....
Wicklander, Amanda A., clerk	2,689.11	.....
Widdows, A. B., inspector	2,841.44	15.00
Widdows, W. O., resident engineer	4,317.09	86.05
Wiggins, John D., materials inspector	230.00	.85
Wilcut, Oszro, grader operator	2,028.37	5.20
Wild, Alfred, section foreman	2,403.62	.....
Wilkenson, M. E., truck driver	259.81	.....
Wilkerson, L. M., blacksmith	1,638.01	.....
Wilkins, F., laborer	1,586.85	.....
Wilkins, Geo., blacksmith	2,266.73	.....
Wilkins, Hugh, rollerman	82.31	.....
Wilks, Don, truck driver	1,469.75	.....
Willey, L., bridge operator	3,022.50	.....
Williams, Bruce W., laborer	30.25	.....
Williams, Darrel, laborer	135.00	.....
Williams, Edward, laborer	227.70	.....
Williams, Everett, truck driver	324.25	.....
Williams, Horace J., clerk	3,190.21	31.00
Williams, John S., caretaker	30.00	.....
Williams, Kenneth, chainman	753.33	.40
Williams, Mabel T., clerk	1,840.00	.....
Williams, Marvin J., grader operator	862.95	8.90
Williams, Treva, laborer	299.70	.....
Williams, W. A., boilerman	370.71	.....
Williams, W. C., division engineer	7,674.79	940.05
Williams, W. T., resident engineer	1,128.99	6.30
Williamson, Dick, laborer	145.25	.....
Willis, Chas., truck driver	2,219.25	.....
Wilson, A. J., laborer	677.70	.....
Wilson, Ed. Q., motor grader operator	1,899.09	7.35
Wilson, Harry G., section foreman	2,575.68	.....
Wilson, John T., rollerman	352.99	.....
Wilson, J. E., section foreman	2,412.70	.....
Wilson, K. L., bulldozer operator	1,261.72	.....
Wilson, R. O., section foreman	1,988.78	.....

* Private car mileage.

LIST OF EMPLOYES—Continued

Name and Title	Amount Received	
	Salary	Expense Allowance
Wilson, Ellis H., office assistant	$ 283.00	$ .....
Wilson, Vern, laborer	6.30	.....
Wilson, V. C., shovel operator	2,543.59	.....
Wineberger, Claude, laborer	57.25	.....
Winkle, O. L., truck driver	737.58	.....
Winkle, R. A., truck driver	1,879.51	15.45
Winkler, Frank, chainman	900.00	.30
Wintermute, E. C., laborer	184.36	.....
Wirtz, W. H. rodman	812.58	15.90
Wise, Clarence, grader operator	818.30	.....
Wise, Guy C., section foreman	2,225.96	15.65
Witchel, A. P., chainman	60.00	.....
Witter, C. T., draftsman	3,804.58	.....
Witty, Ervan, truck driver	1,466.55	.....
Wolfe, Victor D., topographer	2,585.89	.50
Wood, George, stockman	2,689.11	.....
Wood, Geo. E., street inspector	2,700.99	7.85
Wood, G. H., grader operator	2,312.69	.....
Wood, H., truck driver	656.00	9.60
Wood, M. C., office assistant	1,919.44	.....
Wood, Ray A., chainman	1,384.60	13.60
Wooden, C. T., section foreman	2,321.22	2.70
Woodley, E. H., bridgeman	1,893.95	.....
Woods, L. K., laborer	569.60	.....
Woods, W. W., truck driver	241.18	.....
Woodword, R. C., laborer	830.70	.....
Woolridge, Elmer, timber inspector	1,387.05	.....
Wooley, Chas. A., laborer	1,686.71	.....
Workman, Arthur, laborer	1,862.60	.....
Wright, Claude E., materials inspector	2,264.14	.....
Wright, Edgar C., laborer	160.20	.....
Wright, Fred, grader operator	426.15	.....
Wright, J. M., chainman	76.67	.....
Wuonola, Nester, section foreman	2,346.02	.....
Wyllie, Chas. P., laborer	450.60	.....
Wyman, Chas. F., laborer	195.75	.....
Yale, McKinley, truck driver	1,920.90	2.00
Yeager, G. M., assistant auditor	3,510.23	.75
Yeck, Lloyd, laborer	1,728.99	.....
Yerex, C. K.,draftsman	2,923.18	.....
Yocom, Jesse, laborer	1,667.95	.....
Yoder, H. L., assistant bridge foreman	2,719.22	.....
Yohn, Henry, laborer	149.50	.....
York, Albert L., chainman	62.60	3.40
Young, F. T., resident engineer	5,124.90	62.05
Young, Hilbut, transit-rod	2,569.97	1.80
Zaddock, G. W., shovel operator	1,919.05	.....
Zandofsky, John, laborer	1,771.05	.....
Zawatzki, John, laborer	1,735.15	.....
Zimmerman, Carl, bridgeman	1,920.35	.....
Zumwalt, Don, party chief	239.26	.....
Zutz, M. F., levelman	2,530.72	69.70

LIST OF PERSONS RENDERING PROFESSIONAL OR SPECIAL SERVICES

The following is a list of all persons who have rendered professional or other special service for the State Highway Commission during the period from July 1, 1934, to June 30, 1936, together with the amounts of compensation and expense allowance paid to each during that two-year period.

Name and Address	Nature of Service	Compensation	Expense Allowance		
			Meals and Lodging	Transportation	Sundries
Brown & Brown, Inc., Portland	Timber cruising service	$1,822.96	$ 187.30	$ 185.30	$ 12.66
McCluskey, G. B., Salem	Legal service	50.00			5.00
Soule, N. C., Salem	Appraisal service	400.00			
McKenna, Coe A., Salem	Appraisal service	100.00			
Compton, J. C., McMinnville	Arbitration service	125.00	7.00		
Nims, C. B., Portland	Arbitration service	125.00	7.00		
Mc Gowan, F. C., Portland	Appraisal service	250.00			
Metzger-Parker Co., Portland	Appraisal service	300.00			
Hodge, Edwin T., Portland	Consulting geologist	300.00	2.30	19.30	
Davis, James A., Olympia	Consulting engineer	100.00	7.90		
Swartley, A. M., Corvallis	Consulting engineer	100.00	1.85	15.65	.32
Storey, Thorndike, Palmer & Dodge, Boston	Passing on legality of bond issue	1,000.00			
Mc Dougal, Geo. F., Salem	Professional Engineering service	250.00		2.50	23.20
Central Inspection Bureau, Portland	Inspection of steel	1,541.56			
Rawson, R. H., Portland	Inspection of timber	2,769.55			
Hunt Co., Robert W., Chicago	Inspection of cement and steel	314.87			
Kelsey, C. W., Huntington	Inspection of cement	62.98			
Wesener, A. J., Lime	Inspection of cement	122.12			
Moylan, J. E., Portland	Inspection of cement and oil	3,529.77			
Pankey, T. E., Gold Hill	Inspection of cement	2,086.97			
McKinlay, James T., Portland	Inspection of materials	860.00			

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SEP 15 '66

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